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MUSEUM OF VERTEBRATE ZOOLOGY

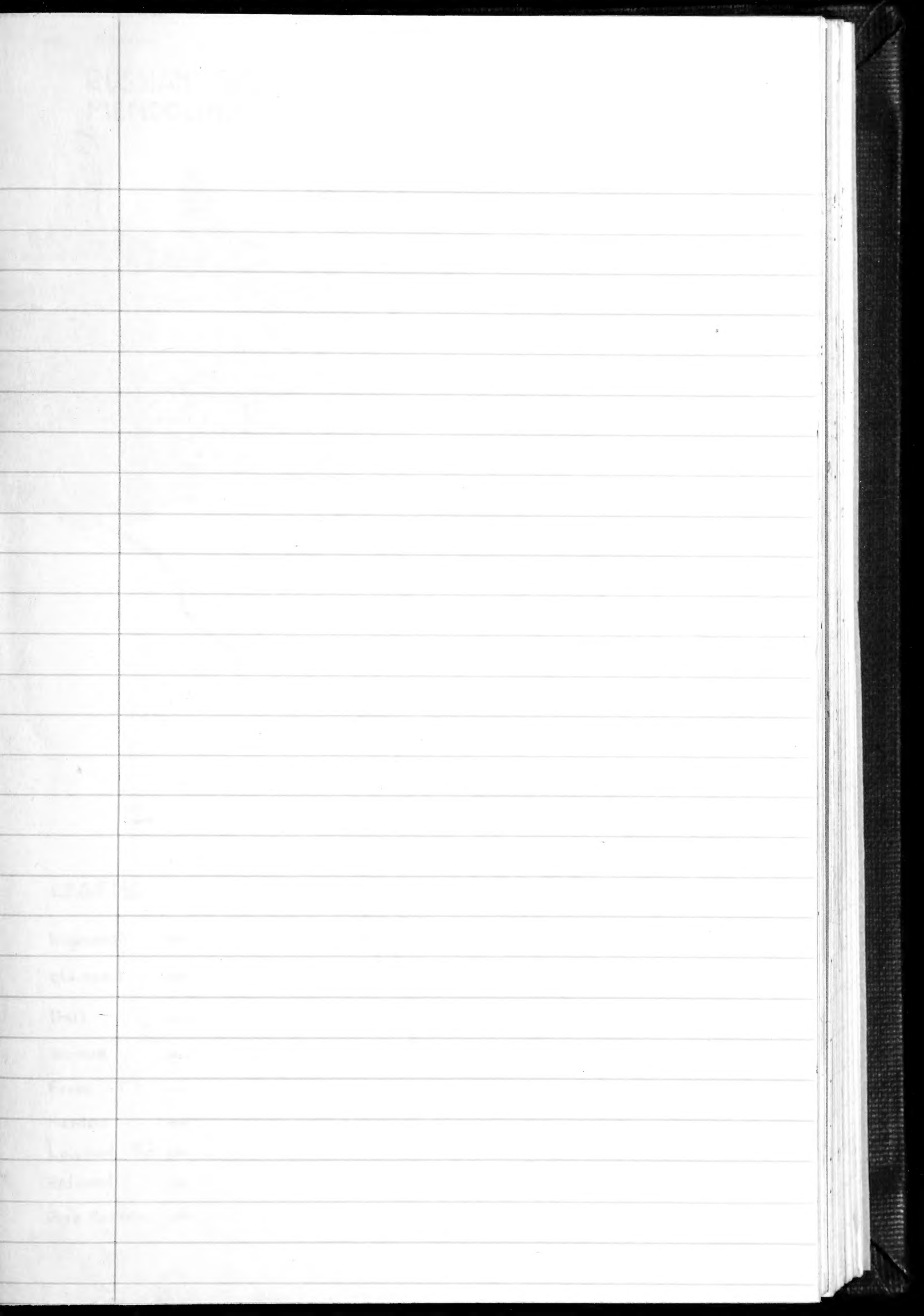
UNIVERSITY OF CALIFORNIA
MUSEUM OF VERTEBRATE ZOOLOGY

Memmler, V

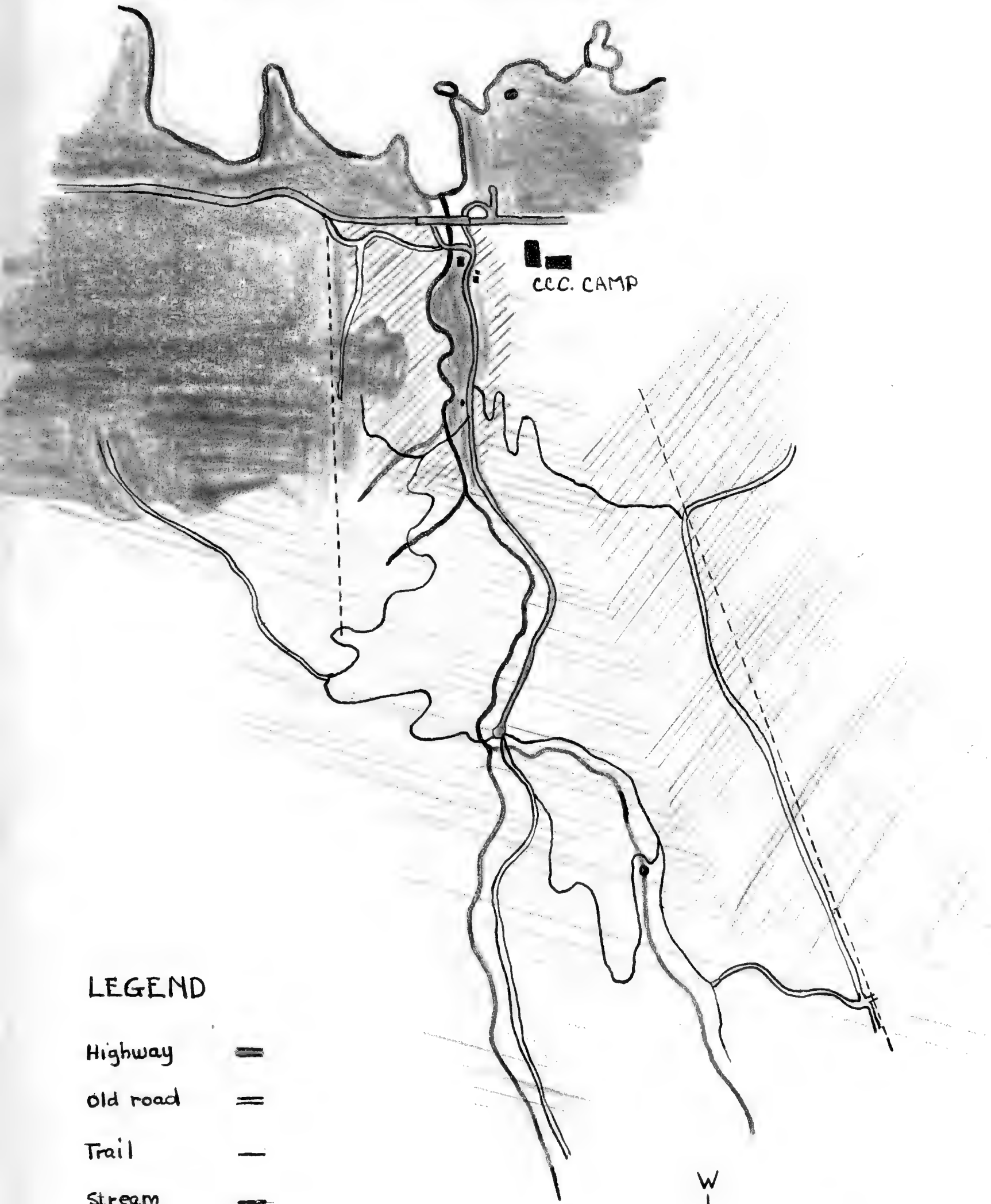
Russian Gulch State Park

Mendocino Co. Calif

May June, 1941

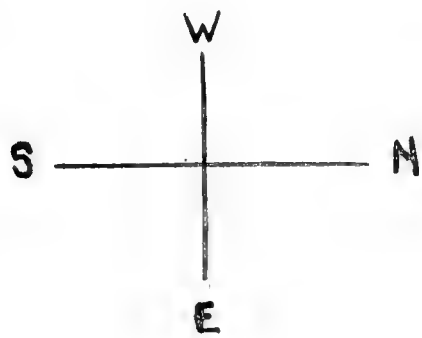


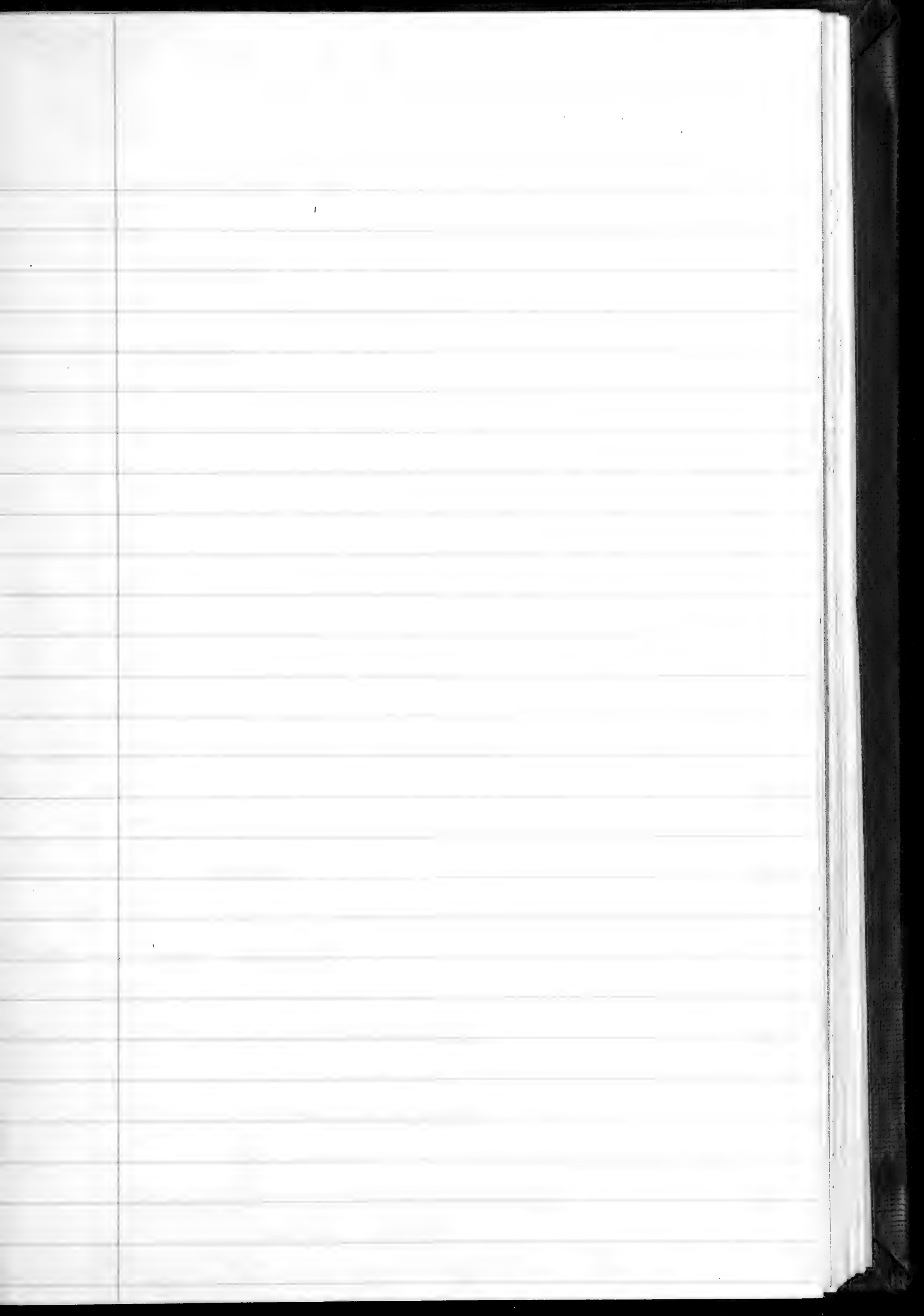
RUSSIAN GULCH STATE PARK
MENDOCINO CO. CALIFORNIA



LEGEND

- Highway ==
- old road ==
- Trail -
- Stream -
- fence ---
- Meadow -
- Lowland Fir -
- Redwood -
- Pine Barren -





V. Menninger
1941

Catalog

May 17, Russian Gulch State Park, Mendocino Co.,
California, elev. 40 ft.

- 14 ♂ Peromyscus maniculatus 166-78-21-19ⁿ-16^c (19.1g)
15 ♂ Sorex pacificus 137-57-17-9ⁿ-6^c (15.3g)
16 ♀ ^{no}emb. Sorex townsendii 122-54-15-12ⁿ-7^c (5g)
17 ♀ ^{no}emb. Sorex vagrans 106-39-13-7ⁿ-4^c (5.4g)
18 Thomomys 355

- May 18, 19 ♀ ^{no}emb. Zapus orarius 222-132-33-15ⁿ-13^c (22.6g)
20 ♀(?) Sorex vagrans 108-46-15-8ⁿ-5^c (4.7g)
21 ♂ Peromyscus maniculatus 167-72-22-19ⁿ-18^c (19.6g)

- May 19, 22 ♂ Russet-backed Thrush (27.8g)
23 ♂ Neotrichus gibbsii 101-35-16 (11.7g)
24 ♂ Sorex 113-49-14-11ⁿ-7^c (4.98g)
25 ♂ Peromyscus maniculatus 178-85-29-20ⁿ-19^c (20.6g)
26 ♀ ^{no}emb. Peromyscus maniculatus 180-80-21-18ⁿ-17^c (20g)

- May 20, 27 ♀ ^{no}emb. Sorex vagrans 92-39-12-7ⁿ (4.6g)
28 ♀(?) Sorex vagrans 98-40-13-7ⁿ (5.1g)
29 ♂ Zapus orarius 222-139-33-15ⁿ-12^c (22.1g)
30 ♂ Peromyscus maniculatus 181-87-21-20ⁿ-17^c (22.8g)

- May 21, 31 ♂ Peromyscus maniculatus 185-87-22-18ⁿ-17^c (23.1g)
32 ♂ Peromyscus maniculatus 169-80-21-18ⁿ-18^c (20.4g)

- May 22, 33 ♀ ^{no}emb. Sorex pacificus 128-55-17-9ⁿ-8^c (8.7g)
34 ♂ Neotrichus gibbsii 110-37-7- (12.6g)
35 ♂ Zapus orarius 203-109-33-16ⁿ-13^c (24.8g)
36 ♂ Peromyscus maniculatus 174-81-22-17ⁿ-15^c (20.1g)
37 ♂ Peromyscus maniculatus 165-80-22-17ⁿ-15^c (19.6g)
38 ♂ Neotoma fuscipes 390-185-41-32ⁿ-28^c (232.7g)

- May 23, 39 ♂ Eutamias townsendii 262-114-38-24ⁿ-17^c (84.4g)

V. Memmler
1991

Catalog

May 24, Russian Gulch State Park, Mendocino Co., Calif. elev. 40'

40 Triturus

41 ♂ Sorex vagrans 104-40-13-7ⁿ-5^c (5.5g)

42 ♀ Neurotrichus gibbsii 110-40-16 (11.7g)

43 ♂ Peromyscus maniculatus 169-83-21-19ⁿ-18^c (19g)

May 25, 75' elev. 44 ♂ Sorex pacificus 142-58-18-10ⁿ-8^c (9.2g)

45 ♂ (immature) Peromyscus maniculatus 127-68-21-15ⁿ-14^c (6.6g)

46 ♀ no emb. Peromyscus maniculatus 185-96-22-18ⁿ-17^c (22.7g)

May 26, Russian Gulch State Park, Mendocino Co., Calif.
elev. 200 ft.

47 ♀ no 1/2 emb. Neotoma fuscipes 302-151-39-29ⁿ-26^c (106.1g)

48 ♀ no emb. Sorex pacificus 150-60-18-9ⁿ-6^c (19.5g)

49 ♀ Peromyscus maniculatus 183-94-22-18ⁿ-15^c (26g)

50 ♂ 40 ft. elev. Peromyscus maniculatus 188-86-22-18ⁿ-15^c (27g)

51 ♂ 200 ft. elev. Neotoma fuscipes 404-195-40-32ⁿ-25^c (267.3g)

May 27, 52 ♀ 2 emb. 5 mm Neotoma fuscipes 401-205-41-32ⁿ-26^c (251.9g)

53 ♂ Reithrodontomys megalotis 105-56-16-17ⁿ-9^c (3.8g)

May 28, Russian Gulch State Park, Mendocino Co., Calif. 40' elev.

54 ♂ Sorex vagrans (?) 128-58-15-11ⁿ-6^c (6.5g)

55 ♂ immature Peromyscus maniculatus 195-70-23-18ⁿ-16^c (11.5g)

56 ♀ 3 emb. 18 mm. Peromyscus maniculatus 165-78-22-16ⁿ-13^c (21.8g)

57 ♂ Peromyscus maniculatus 165-77-22-16ⁿ-15^c (19.3g)

58 ♀ 50' elev. 4 emb. 7 m.m. Microtus ca 153-45-22-16ⁿ-12^c (32.7g)

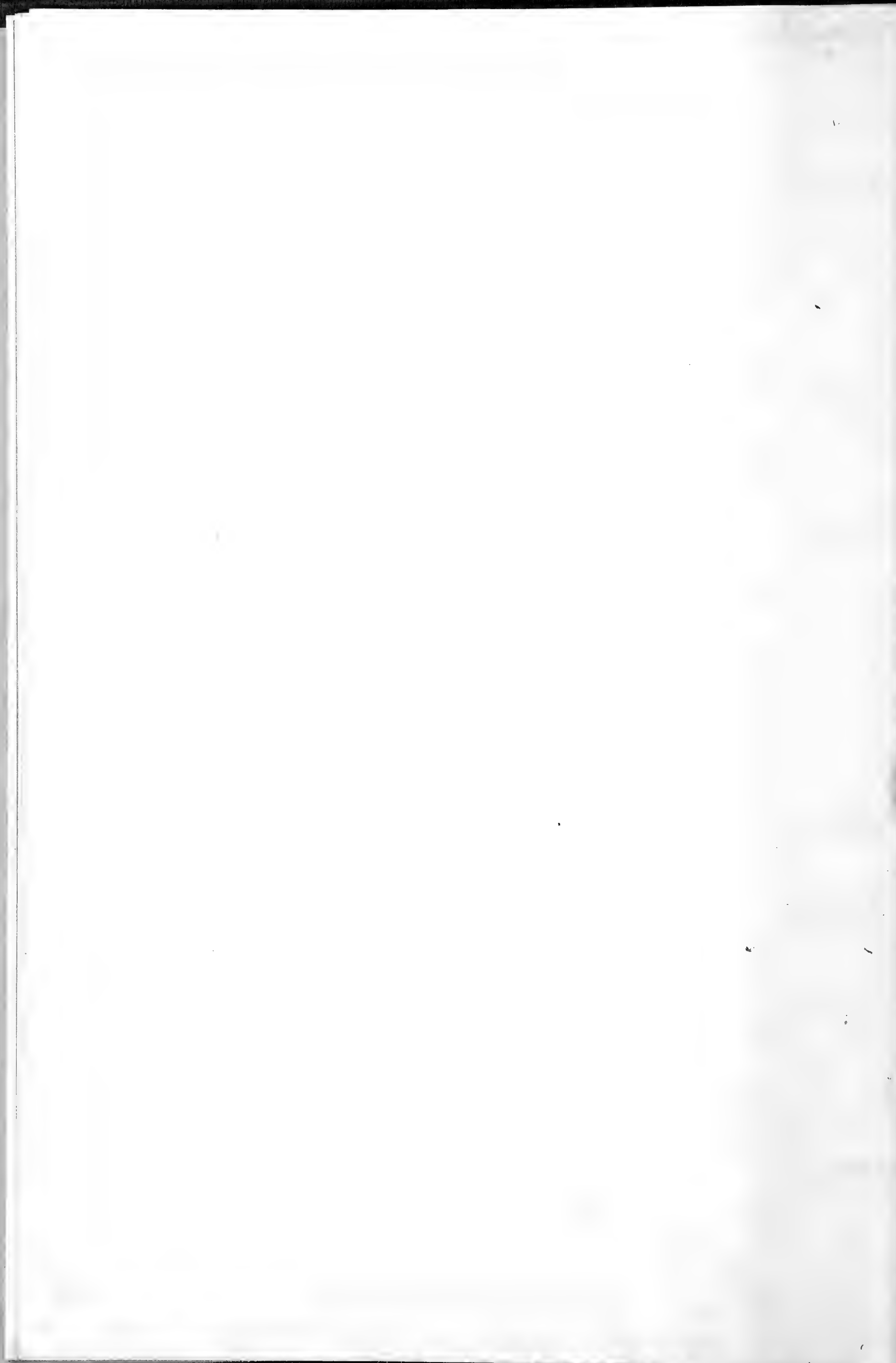
May 29, 59 ♂ Reithrodontomys megalotis 133-68-18-15ⁿ-12^c (8.6g)

60 ♀ no emb. Thomomys bottae 164-48-24-5ⁿ-3^c (45.7g)

61 ♀ no emb. immature 75 ft. elev. Peromyscus maniculatus 138-65-21-17ⁿ-14^c (11.1g)

62 ♂ 40 ft. elev. Peromyscus maniculatus 168-80-21-19ⁿ-17^c (21.4g)

63 ♂ immature Peromyscus maniculatus 143-72-22-16ⁿ-14^c (11.2g)



V. Meininger
1941

Catalog

May 30. Russian Gulch State Park, Mendocino Co., Calif 40' elev.

64 ♂ Neurotrichus gibbsii 115-38-17- (11.5g)

65 ♂ Neurotrichus gibbsii 108-36-17 (12.5g)

75 ft. elev.

66 Mustela 239-65-32-18ⁿ-11^c (72g)

May 31, 200 ft. elev.

67 ♀ no emb. Sorex vagrans. 90-36-12-7ⁿ-4^c (9.2g)

68 ♂ Peromyscus maniculatus 154-69-21-17ⁿ-15^c (18.6g)

May 21, Pine Barrens, Russian Gulch State Park,
Mendocino Co., Calif. 500' elev.

69 Scat

70 Scat

71 Scat

May 27, Russian Gulch State Park, Mendocino Co., Calif.
200 ft. elev.

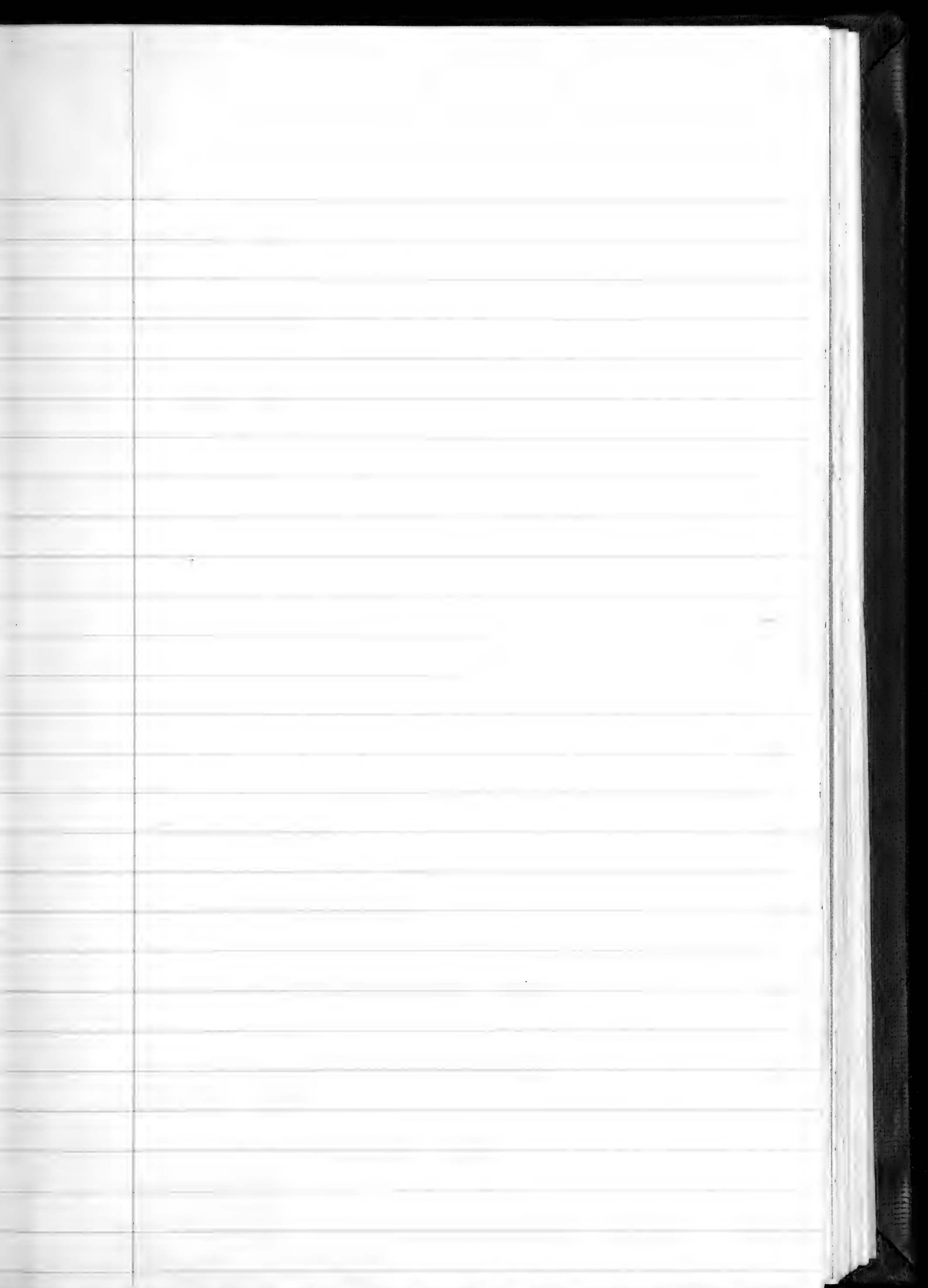
72 Scat Neotoma fuscipes

May 29, 75 ft. elev. Redwood Forest

73 Scat

~~May~~ June 1, Pine Barrens, Russian Gulch State Park,
Mendocino Co., Calif. 500' elev.

74 Sceloporus



V. memmles
1941

Itinerary

May 16, A group of five intending to base Camp along the coast somewhere in Mendocino Co. left Berkeley at 7:10 A.M. Party proper consisted of Mrs. Hilda W. Grinnell as leader, and included Josephine Crowley, Frances Prack, Jean Bouliware and myself. Mr. David Johnson was with us on the first day and drove the old Museum Rio Truck. The rest of us went in Mrs. Grinnell's car. We followed highway 101, after crossing the San Francisco Bay on the Richmond-San Raphael ferry, north to Cloverdale. At Cloverdale we changed to highway 28. We pass thru forests of Coast Redwoods and were unable to locate Dimmick State Park because the sign was missing. We stopped for lunch near the lower limits of the Navarro River. Vultures and Red-tail hawk, two or 3 of the former and two of the latter. Next we proceeded to Van Damme State Park and found a C.C.C. Camp there. Soon departed and traveled on north to the Russian Gulch State Park which is about 2 miles north of Mendocino City. The ranger, Mr. Engelhardt gave us permission to trap small mammals and collect Amphibians, Reptiles and flowers. We camped about



V. Wemmer
1941

2

Itinerary

May 16, one quarter of a mile east of the Ranger's house. The camp has water and cooking facility. It is about 8 yds from a small stream which is now about 6 ft across.

May 17, Russian Gulch State Park, Menodino Co., California Clev. 70 ft. at Camp.

Last evening a trap line was set after dark by Dave Johnson accompanied by Frances, Josephine and myself.

31 traps were set, all museum ^{at 10-12 paces.} Specials. The line ran along

a riparian marginal habitat at the edges of small grassy meadows.

The shrubs on the margin were mostly Thimble Berry, Salmon Berry and Cascade sagrada. Many nettles are interspersed between the shrubs.

Heuchera sp., Alum Root is very abundant in this marginal Riparian habitat.

Bait used was crushed walnut meats; this was suggested for trapping shrews by Ward Russel. 12 animals were caught;

4 Sorex pacificus ^(1 ♀, 3 ♂), 2 ♀ Sorex townsendii,

1 ♀ Sorex vagrans, 1 Peromyscus maniculatus and 1 Reithrodontomys megalotis.

Equisetum is also very abundant in the habitat. Red Alders, Alnus rubra is the most common tree along the stream.

V. Memmler
1941

3

Itinerary

May 18, Russian Gulch State Park, Mendocino Co.
California, 40 ft. elev. at Camp.

Late evening Josephine and I set out 26 traps, ^{at 10-12 p.m.} in the same habitat as that set in the evening before. This morning we found 8 animals trapped, one Zapus orarius(?), one Sorex vagrans and 6 Peromyscus maniculatus. There were 4 traps sprung. There was rain falling when we set the traps after sundown and it was rain off and on during the night. The ground and all of the vegetation was very moist both in the evening and this morning. Plants in the habitat grow so profusely that the only places which have clear ground showing are beneath the thickets of Thimble Berry and Salmon Berry which follow the creek and bound the meadows. Yesterday three Garter Snakes were seen while we were setting up camp. I caught one of these and preserved it. ~~After~~ ^{later} afternoon Josephine and I walked ^{east} up the road which follows the creek. It gains elevation very little and ends in a circle about $1\frac{1}{2}$ - 2 miles from camp. The Redwoods are not seen near Camp,

V. Menninger
1941

4

Itinerary

May 18, Russian Gulch State Park, Mendocino Co.
California elev. 40 ft. at Camp
But, ^{we} soon saw them as the road increased in altitude slightly. Here they came down even to the waters edge. Red Alders remain the dominant tree along the stream which is still close to the road. Tree and shrubs seen in abundance were: Larix heterophylla, Pseudotsuga taxifolia, Sequoia sempervirens, Abies grandis, Pinus muricata, Thimble Berry, Salmon Berry, Scarlet Coast Elderberry, Cascara Sagrada, Tan Oak. A few Gooseberries and California Laurel were seen. Of the herbaceous plants the ferns are most abundant: Trail-finger fern, Sword Fern, Lady fern and Bracken being very abundant and Gold-backed fern were at a minimum. During our walk Josephine discovered a Triturus sp.? in the road which was quite muddy and full of puddles here. The skin of the Triturus was very dry and brown above, less dry and orange below. This afternoon Frances and Mrs. Grinnell and I went up the North Trail which begins about 200 yds west of our camp, going up the north canyon

V. Mendenhall
1941

5

Itinerary

May 18, Russian Gulch State Park, Mendocino Co., California, elev. 40 ft. at Camp.

wall. As we gained elevation several distinct habitat zones were obvious.

In the valley is a Riparian Habitat with small grassy meadows. As one ascends the canyon wall one passes thru a small habitat of Lowland Fir, Douglas Fir, Red Alder, and Tsuga heterophylla. Above this is a Coast Redwood forest with sparse undergrowth. As the Redwood begin to thin out above there are quantities of Rhododendrons, now in full bloom. At the top of the ridge there is a small plateau which contains many interesting plants such as Pinus contorta ^{Bolanderi} ~~ver. n.~~, Cupressus pygmaea, Bishop Pine, Gaultheria shallon, Viola sermentosa, Buckel Berry and Labrador Tea. Star flowers, Clintonia and Ground Iris grow mostly in the shade of other larger plants.

May 19, Last evening Josephine Crowley and I set out 23 traps ^{at 1,200 ft.} in Riparian marginal habitat similar to the two previous days but farther up the road. We found 11 animals in the traps, 1 Neurotrichus, 2 Sorex, 6 Peromyscus, 1 Russet-backed Thrush and the hind quarters of 1 Zapus. Three of the Peromyscus had white spots on the face, these very



V. Memmiker
1941

6

Itinerary

May 19, Russian Gulch State Park, Mendocino
Co., California 40 ft. elev.

irregular. 4 other traps were sprung.
The ground became moderately moist
over night, but there was clear weather
all night. The Zapus was caught
in a drain running under the road between
its point of exit from the road & its
entrance into the stream. The ground
was level and moist.

May 20, A trap line of 22 traps were set in
the same habitat and line as on May
16th. Traps spaced at 10-12 paces &
baited with crushed walnut meats.
There were 10 traps with animals
this morning. One trap was sprung
and one poor trap, unable to snap
had been cleaned of its bait. The
catch included 3♂ Peromyscus maniculatus
3♂ Zapus orarius, 1♂ Zorex pacificus,
1♀ Sorex townsendi and 2♀ Zorex
vagrans.

May 21, Jean Boulware, Mrs. Grinnell and I
left our base camp after an early
breakfast intending to set traps for
chipmunks and weasels. We set
8 rat traps ^{in runways and on stumps} on logs, for chipmunks & ^{apledontia}
And 2 steel no. 1 traps for weasels

W. Mammals
1941

7.

Itinerary

May 21, Russian Gulch State Park, Mendocino Co., Calif.
along logs at the side and a little beneath them in the shade. The sets were made in the Redwood forest and the marginal habitat between it and the pine barrens. Elevation varied from about 60' to 750'. The first trap was set for *Aplodontia* in a wet bank next to the trail, (We follow the North Trail). The trap was not sprung. The next two were set on ~~the~~ logs for chipmunks and also were unsprung. The next was set on a stump where a Chickory had once been seen. This also was not sprung. Another was set in a broad runway in the bank beside the road in the hope of getting an *Aplodontia*. This trap caught a *Sorex vagrans*. All these 5 traps were in the Redwood forest. The forest is rather dark. There is only low undergrowth composed of Broken ferns, Ground Iris, *Gaultheria*, and Sword ferns. There is a very heavy leaf cover on the ground.

V. Memmler
1941

8

Itinerary

May 21, Russian Gulch State Park, Mendocino Co. Calif.

One weasel trap was set in this Redwood habitat. The three remaining rat traps were set on top of large logs in the marginal habitat between Pine Barren and Redwoods. There are clumps of Deer fern and many *Arctostaphylos* nearby. The trees include Redwood, Bishop Pine and Douglas fir. These however are few and there is consequently very little shade. There was no catch in these traps either. The other weasel trap was set in a darker region nearly next to a log and with Redwood habitat plants. This was also untouched. The weasel traps were set with weasel scent.

May 22, Jean Boulware and I set 37 traps in the Gulch east of camp along the road in the typical Riparian - marginal habitat. There were 2 traps sprung without animals and 10 with.

V. Mearns
1941

9

Itinerary

May 22, Russian Gulch State Park, Mendocino Co., Calif. Elevation 90 feet.
There were 5 Peromyscus maniculatus 2 ♀'s and 3 ♂'s., 1 ♀ Sorex pacificus, 3 ♂ Neurotrichus, and 1 ♂ Zapus.

May 23, Jean Bouleware, Josephine Crowley, Mrs. Grinnell and I set out to explore the trails on the north side of the park. We found that the road in the gulch extends eastward for about $1\frac{1}{2}$ ^{miles} beyond the camp grounds and ends in a circle. From this point we took a trail to the falls one mile distant ~~from this point~~. The trail continued on beyond the falls up the same creek for about $\frac{1}{2}$ a mile and then turned up a canyon and led out onto the pine barrens. There is a road across the barrens in an east west direction along the fence which marks the boundary to the park. We followed this west to the top of the north trail. As we passed down the north trail we collected the traps set out from May 21 at.

Itinerary

May 23, Russian Gulch State Park, Mendocino Co., Calif. 40 ft
The traps set in the margin between the pine barrens and Redwood on top of logs contained two Eutamias townsendii, one ♂ and one ♀.

May 24, Josephine Crowley and I set out 24 museum specials last evening in the Marginal-Riparian habitat just east of camp. We tried to set our traps more out in the meadows than previously described for May 17. The area had been trapped 2 times before in this week, once by myself and Josephine and once by Frances and Josephine. As expected the was small. It consisted of 1 ♂ Zapus, 3 Neotriches 1 ♂ & 1 ♀, 1 ♂ Sorex vagrans and 2 ♂ Peromyscus maniculatus. We believe that the area has been rather thoroughly trapped out here close to camp so that traps will now be set farther afield.

May 25, Last evening Josephine Crowley and I set 24 museum special mouse traps baited with crushed walnuts along the north fork of

W. Mummer
1991

11

Itinerary

May 25, Russian Gulch State Park, Mendocino Co., Calif. elev. 75'
the gulch stream just beyond the end of the road which ends in a circle. The road extends ^{east} about $1\frac{1}{2}$ miles beyond the camp grounds. The habitat was Riparian - Redwood. Plants in abundance were: Alum root, Yerba Santa, Sword fern, Lady fern, Deer fern, Redwood Sorrel, Bleeding Heart, Aders Tongue, Bed Straws and Montia sibirica. There were large quantities of moss on the ground and on logs. The ground has a thick cover of Redwood needles. The ground was quite moist. We caught 5 animals. 1 ♂ immature Peromyscus maniculatus, 1 ♀ Peromyscus maniculatus, 1 ♂ Sorex pacificus, 1 Sorex Vagrans and 1 ♂ Peromyscus maniculatus. Traps were spaced at about 10 paces.

May 26, Russian Gulch State Park, Mendocino Co., Calif. elev. 200'
Josephine Crowley and I set 24 Museum Special mouse traps along the margin of a large open meadow on top of the hill above the south wall of the canyon. The dominant plants are Thimble Trees,



Itinerary

May 26, Russian Gulch State Park, Mendocino Co., Calif. 200' elev.
Blackberry and Wild Rose. Traps were spaced about every 20-30 paces. There were 9 traps sprung + without animals. We caught 1 ♀ Sorex pacificus, 2 ♂ Peromyscus maniculatus, 1 ♀ Peromyscus maniculatus and 1 ♀ Sorex vagrans. In addition 4 Rat traps were set in the vicinity of Woodrats nests. One not in sight of any definite house but in the typical habitat was found with a few bits of fur and the intestinal tract were next to the trap which was sprung. Another trap set about 10 paces from a house had a ♀ adult. One set 20 paces from the house contained an immature ♀. A fourth trap was unsprung and not near a nest but only in the correct habitat. Trees in the habitat were Grand fir, Douglas fir and Tan Oak. The ground is abundant with dead branches. It is very dark in the habitat since the trees are large and cast much shade. There is little moss on the ground.



V. Mearns
1941

13

Itinerary

May 26, Russian Gulch State Park, Mendocino Co., Calif. elev. 200'
and ground cover is scarce because of
the deep shade. Plants growing
here are tall and seem to be
growing for the light. We also
caught 1 ♂ Zapus varianus in
the marginal-meadow habitat.

May 27, Josephine Crowley and I set 23 traps
of the Museum Special variety and
5 woodrat traps last evening.
Half of the mouse traps were
set along an old narrow ^{road} thickly over-
grown with thimbleberry along
the margins. There was one ♂
Peromyscus maniculatus caught
here. Traps were spaced at
about 30 paces. The ^{road} passes thru
openly spaced Douglas Fir, Bishop Pine
and Grand Fir. Three Rat traps
were set off the trail in a more
overgrown habitat. The first,
just off the road about 2 yds
caught a ♂ Peromyscus maniculatus.
The second was set about 8 yds
from a Woodrats nest. It was
quite a ways off the trail.
The nest was the same as the
one near which we caught



V. Memmiker
1941

14

Itinerary

May 21, Russian Gulch State Park, Mendocino Co., Calif. 200' elev.
2 ♀ Woodrats the day before. A third trap was placed off the road about 20 yds. and about 2 yds from a Woodrat nest. The second trap was sprung, the bait gone and the bait tag gnawed. The third trap caught a ♀ adult Woodrat. She contained 2, 5 m.m. embryos. The other half of the mouse traps were set above a large meadow in a very open Bishop Pine habitat. Grass was very abundant and Thimble-berries and Wild roses formed clumps in the clearing. The traps were placed at about 30 paces. There was only one catch a ♀ Sorex Pacificus. 4 of the mouse traps were sprung beside those with animals. The night was clear with a heavy dew. The grass was almost as wet as it was the night before when it rained very hard during the night. This region has no Redwood trees and therefore seems to be preferred by Woodrats as a place to build their nests.



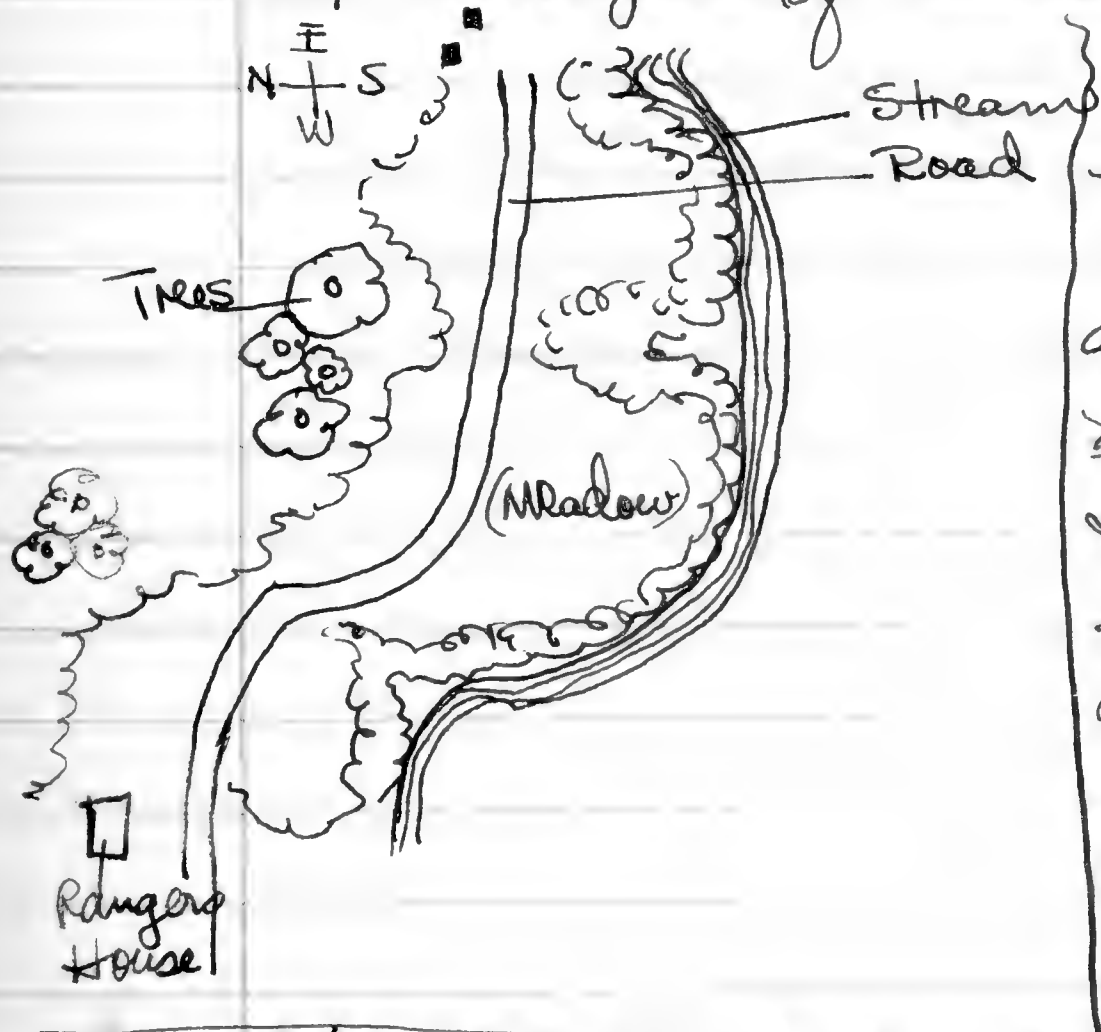
W. Menniger
1941

15

Itinerary

May 28, Russian Gulch State Park, Mendocino Co., Calif.
40' elev.

23 traps were set, half in a marginal meadow habitat on the north side of the road between our Camp and the Rangers house. The other half were in the marginal riparian habitat on the South side of the Road. The latter runs next to clear meadows now prepared for camp sights. The vegetation is the same as described on May 17th in the second habitat. The first habitat was mainly Thimbleberry bushes along the margins of small meadows.



One Sorex was caught in the first habitat and 2 Peromyscus maniculatus. In the second habitat one Sorex was caught and 4 Peromyscus maniculatus.

A total of 2 ♂ Sorex and 5 ♂ and 1 ♀ Peromyscus maniculatus were caught.



V. Kemmle
1941

16

Itinerary

May 28, Russian Gulch State Park, Mendocino Co., Calif.
40' elev.

2 traps were sprung. Traps were spaced at about 12 paces. The weather was clear last evening but there was a heavy dew on the grass this morning. Since we have been here we have had rain twice, once the second night, May 17 and again on May 26. The grass and shrubs have always had a heavy dew in the morning.

May 29, 23 traps of the Museum special variety ^{were set} in a Marginal Riparian habitat west of Camp. The plants are as those stated on May 17. Traps were spaced at about 12 paces. 5 traps were sprung, 6 others contained animals. 1 ♀ Microtus with ⁶ embryos, ²¹mm. was caught in a meadow a yd. from the marginal habitat. 1 Immature ♀ and 1 immature ♂ Peromyscus maniculatus were caught. 1 adult ♀ and 1 adult ♂ Peromyscus maniculatus were caught and 1 ♂ Reithrodontomys megalotis. In the afternoon Josephine and I took a walk up the south trail



V. Mearns
1941

17

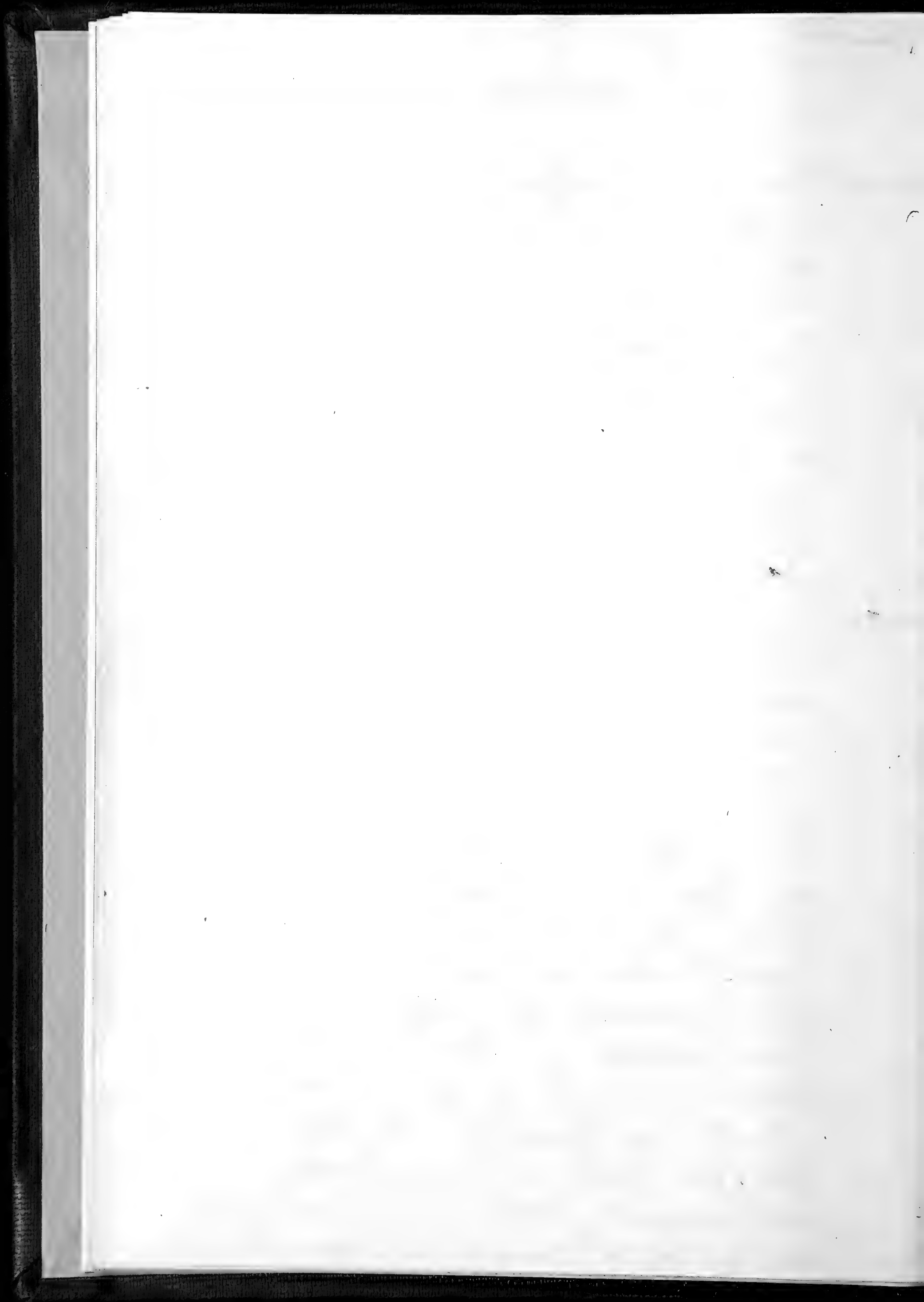
Itinerary

May 29, Russian Gulch State Park, Mendocino Co., Calif.

beginning at its west end. We saw a California Woodpecker in the Redwoods near a clearing. He was perched on a Grand Fir. Later farther in the woods not near any clearing we saw another one pecking on a snag. We saw the foot prints of a deer while walking thru dense Redwood and Douglas Fir forest on an old road.

May 30, 40 ft. elev.

Last evening Josephine Crowley and I set 23 museum special traps in 2 small meadows between the road and the stream near our Camp. Our Camp is no. 27. We caught 1 ♂ Zapus, and 2 ♂ Neotriches. 3 traps were sprung and 5 others had feces on them and the bait eaten away. The meadows had grasses of several varieties, the tallest 3' height. We set in runways in the grass in the hope of catching Microtus. It began to drizzle last evening about 9 P.M. and must have continued off and on all night. It was still



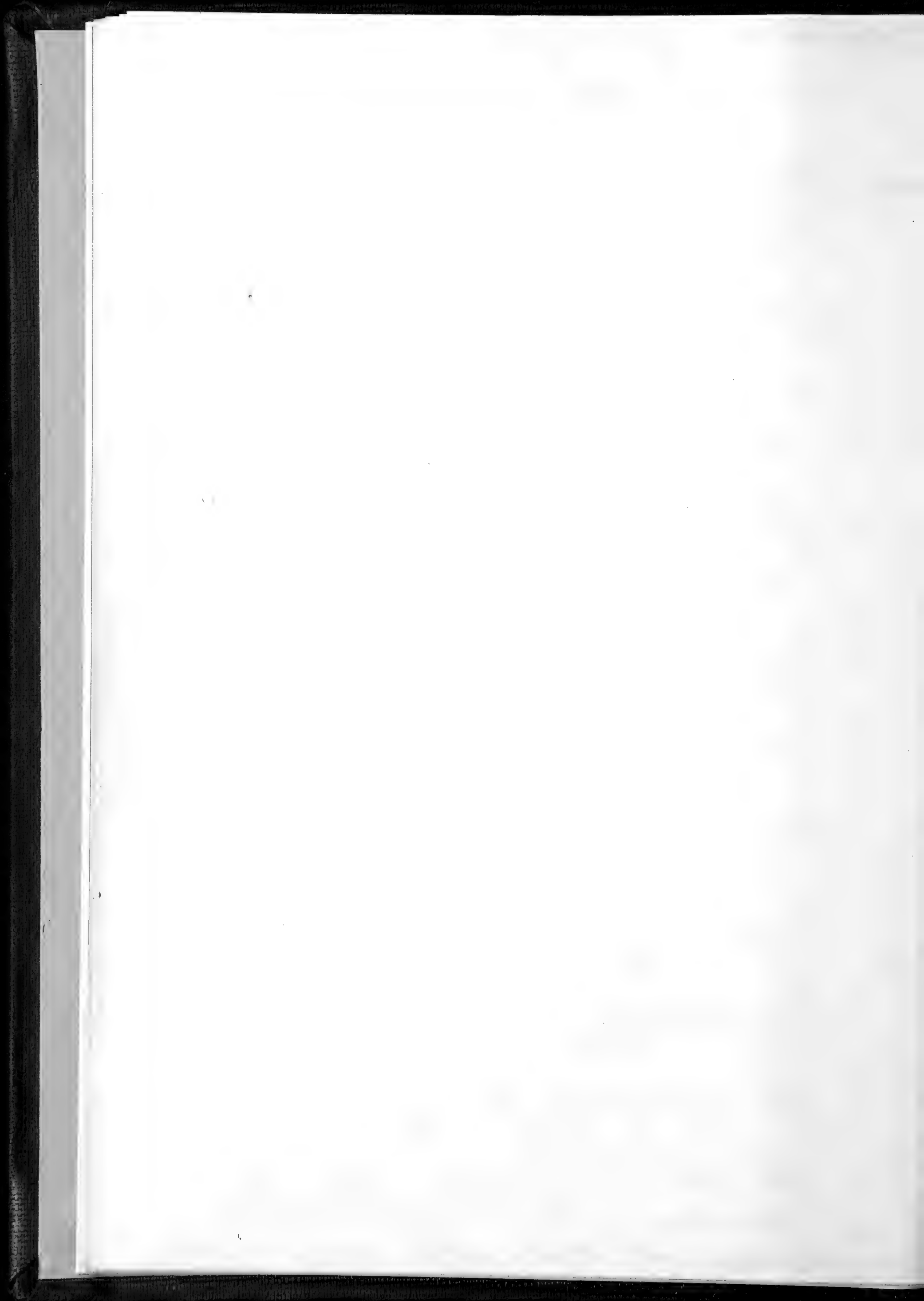
Itinerary

May 30, Russian Gulch State Park, Mendocino Co., Calif.
elev. 80 ft.

raining this morning when we picked up our traps. It has continued to rain and is still raining now at 1:15 P.M.

May 31, elevation ⁷⁵~~80~~ ft.

It stopped raining about 2:00 P.M. yesterday afternoon. At about 3 P.M. Josephine Crowley and I set out to explore some of the places where Mrs. Grinnell had set traps for Weasel and *Aplodontia* with her. We found a young weasel caught in a rat trap scented with weasel scent and placed under an old fire hollowed stump. There were many dead logs lying about. The slope of the hillside was about 30° . The habitat was a Redwood forest with some Douglas Fir and Lowland fir interspersed. There is a deep ground cover of old needles and ferns. Moss grows thickly on the logs and stumps. The weasel was caught by the neck and was still alive when



V. Memmuler
1941

19

Itinerary

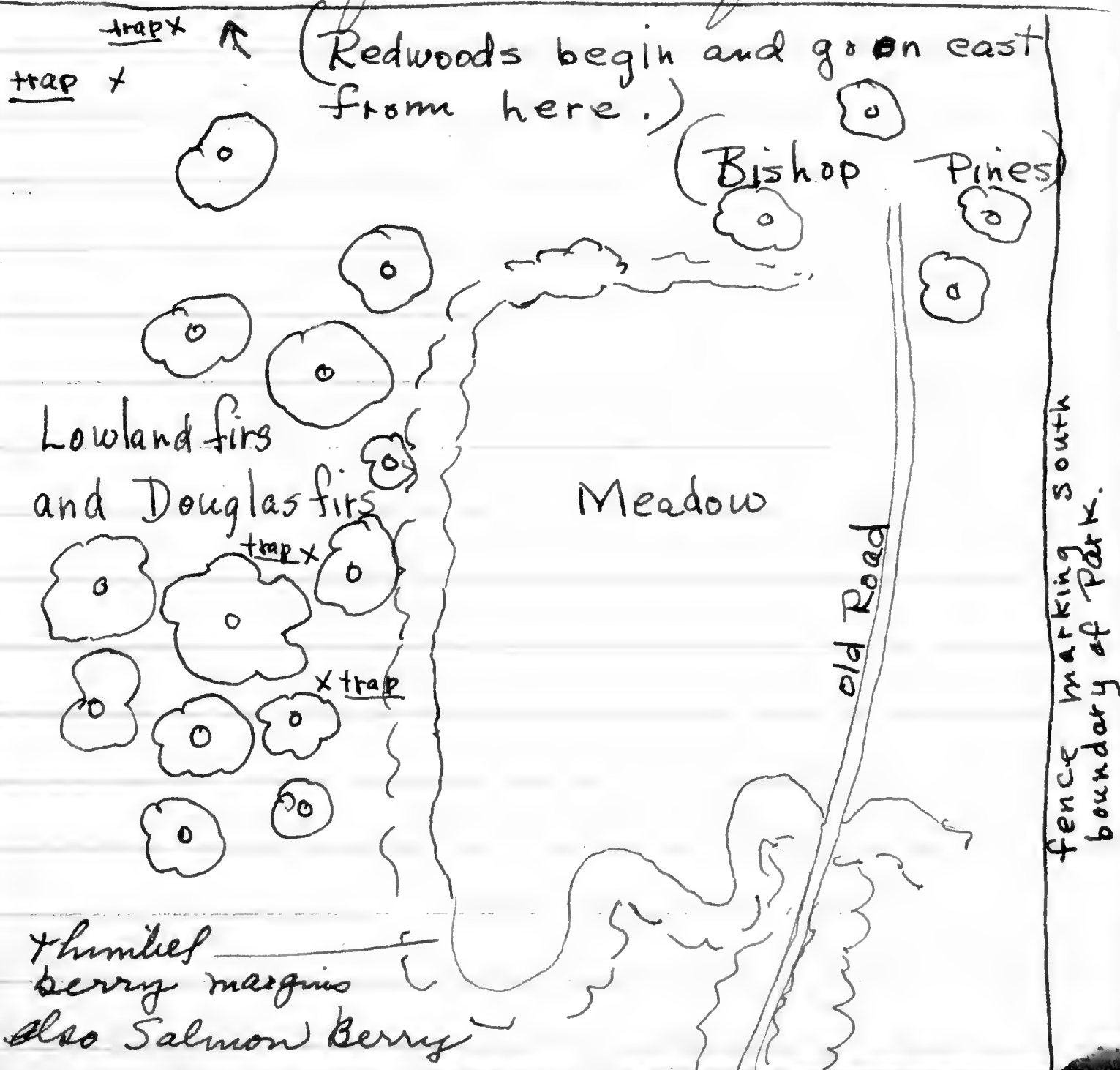
May 31, Russian Gulch State Park, Mendocino Co., Calif. 75'
we found it. Mrs. Grinnell squeezed it over the lungs but could not kill it. I hit it across the back ^{with my hand}, but still could not kill it. Then Mrs. Grinnell struck it with a stick across the back, breaking its back and killing it. I put up the weasel.
At about 5:30 P.M. Josephine and I set out to set our mouse traps and 8 rat traps. She set the former and I set the latter. I set 3 traps near the entrances to 2 Woodrat houses just off the main entrance road to the gulch. This morning 2 of these were un sprung and one was sprung and the bait gone. I next set 3 traps in the lowland fir forest just north of the large meadow on top of the south wall of the camp. One trap was set by a nest at the foot of a Pinus muricata, one at the foot of a Abies grandis and another at the foot of a Tree Chirquipin. 2 of these were sprung with the bait



Itinerary

May 31, Russian Gulch State Park, Mendocino Co., Calif. 200' elev.

gone and the third was unsprung.
Next I put 2 traps in the Redwood forest north-east of the meadow.
One was at the foot of a Cypress tree. It caught a *Peromyscus maniculatus*. The other was at the foot of a ^{clump} Redwood trees and was built of Redwood twigs and leaves. The trap had caught a wood rat, but only the entrails and some fur was left.



V. Mearns
1991

21

Itinerary

June 1, Russian Gulch State Park, Mendocino Co., Calif. elev. 500 ft. Due north of northern boundary of park on Pine barrens.

Jean T. Boulware, Josephine Crowley and I left our camp in the Gulch about 6:20 P.M. with traps and bedding, intending to set traps on the barrens and spend the night there. We reached our destination about 6:45 P.M. and set traps until 7:45 P.M. We set 39 traps about 5 paces apart on opposite margins of an old road thru the Barrens. Josephine returned to the Gulch after helping us set traps. We retired to our sleeping bags. We noticed a bat in flight before we fell asleep. We woke up at 4:50 A.M., the sun had not yet risen. We observed some Band-tailed Pigeons in flight. We got up at 5:45 A.M. and Josephine arrived to help us. We picked up the traps. One caught a Sorex vagrans another a Peromyscus maniculatus. Three traps were sprung beside these. We heard Wren-tits and

V. Memminger
1891

22

Itinerary

June 1, Russian Gulch State Park, Mendocino Co., Calif. elev. 500 ft.

saw a Spotted Towhee. An olive-sided Flycatcher was seen foraging out from a perch on an old snag. The road along which we set ran in a north-south direction curving westward as it went north. The dominant plants of the pine barrens are: Rhododendrons, Vaccinium, Brake fern, Mangrovia, Pygmy Cypress, Pinus muricata, Pinus contorta var. bolanderi, Gaultheria, Tree Chinquapin, Gum Oak, and low pine grasses.

V. Mammals
1991

23

Itinerary

June 1, Russian Gulch State Park, Mendocino Co., Calif
Elevation up to 500 ft.

Summary of Animals Caught and preserved from May 17 to June 1, by our expedition.

Mammals Stuffed with skulls

<i>Mustela</i>	1
<i>Neotoma fuscipes</i>	7
<i>Eutamias townsendii</i>	4
<i>Thomomys bottae</i>	10
<i>Microtus</i>	15
<i>Peromyscus maniculatus</i>	65
<i>Zapus orarius</i>	11
<i>Reithrodontomys megalotis</i>	3
<i>Sorex pacificus</i>	17
<i>Sorex townsendii</i>	7
<i>Sorex vagrans</i>	27
<i>Neurotrichus gibbsii</i>	15
Othe skins and skulls	176

Alcoholic

Total 5
Total 181

<i>Neurotrichus gibbsii</i>	1
<i>Neotoma embryos and Stomach</i>	1
<u>Formalin</u>	
<i>Reithrodontomys megalotis</i>	1
<i>Thamnophis</i>	3
<i>Triturus</i>	4
<i>Batrachoseps</i>	2
<i>Hyla</i>	2

V. Mearns
1911

27

Itinerary

June 1, Russian Gulch State Park Mendocino Co.,
Calif. Elevation up to 500 ft.

Skulls only

Sylvilagus bachmani

1

Neurotrichus

1

Scatological Specimens

2

Russet-backed Thrush

1

205

June 2, *Sceloporus*

1

Dicamptodon ensatus

1

Final Total 207

List of Birds seen in Russian
Gulch State Park, with habitat
and abundance:

1. Baird Cormorant, Coast, Abundant
2. Western Harlequin Duck, Stream in Gulch, Rare
3. Turkey Vulture, Over Gulch, Rare
4. Valley Quail, Pine Barrens, Rare
5. Black Oyster-Catcher, Coast, Rare
6. Pigeon Guillemot, Coast, Abundant
7. Band-Tailed Pigeon, Pine Barrens + Gulch, ^{very} Abundant
8. Mourning Dove, Pine Barrens, Several
9. Vaux Swift, Over Gulch, Abundant
10. Allen Hummingbird, Gulch, Several
11. Western Belted Kingfisher, Gulch, Several
12. California Woodpecker, Redwood + Pine Barrens
Abundant
13. Violet Green Swallow, Over Gulch, Abundant



V. Mummler
1991

25

Itinerary

June 2, Russian Gulch State Park, Mendocino Co., Calif. up to 500 ft. elev.

List of birds continued:

14. Steller Jay, in Gulch, Abundant
15. Western Crow, over Gulch, Several
17. Slender-billed Nuthatch, Gulch, rare
18. Wren-tit, Gulch, Very abundant
19. Western Winter Wren, Redwood, abundant
20. Russet-Backed Thrush, Gulch, very abundant
21. Hutton Vireo, Pine Barrens, several
22. Pileolated Warbler, Gulch, abundant
23. Western Meadowlark, Sea-Cliff Meadows, several
24. Spotted Towhee, Pine Barrens, rare
25. White-Crowned Sparrow, Sea Cliff Meadows, ^{abundant}
26. Song Sparrow, Gulch, Very abundant.
27. Western Wood Pewee, Gulch, several.

June 2, We were assisted on our homeward trip by George Bartholomew who arrived at about 3:00 P.M., Sunday June 1, with the Museum Truck.

Rising at 5:30 A.M. we broke Camp and were ready to leave by 8:00 A.M. June 2. We returned home via highway 28 to Gowerdale, 101 to Geyserville and turned off here on the highway ²⁸, thru the Napa valley. We stopped at the Dole Mill for lunch.



W. Memminger
1991

26

Itinerary

June 3, Berkeley, California, Alameda Co.

After lunch we continued on to the bridge at Crockett and on to Berkeley. We reached Berkeley at 5:00 P.M.

Birds observed during our trip, ^{home} were as follows:

Turkey Vultures

California Woodpecker

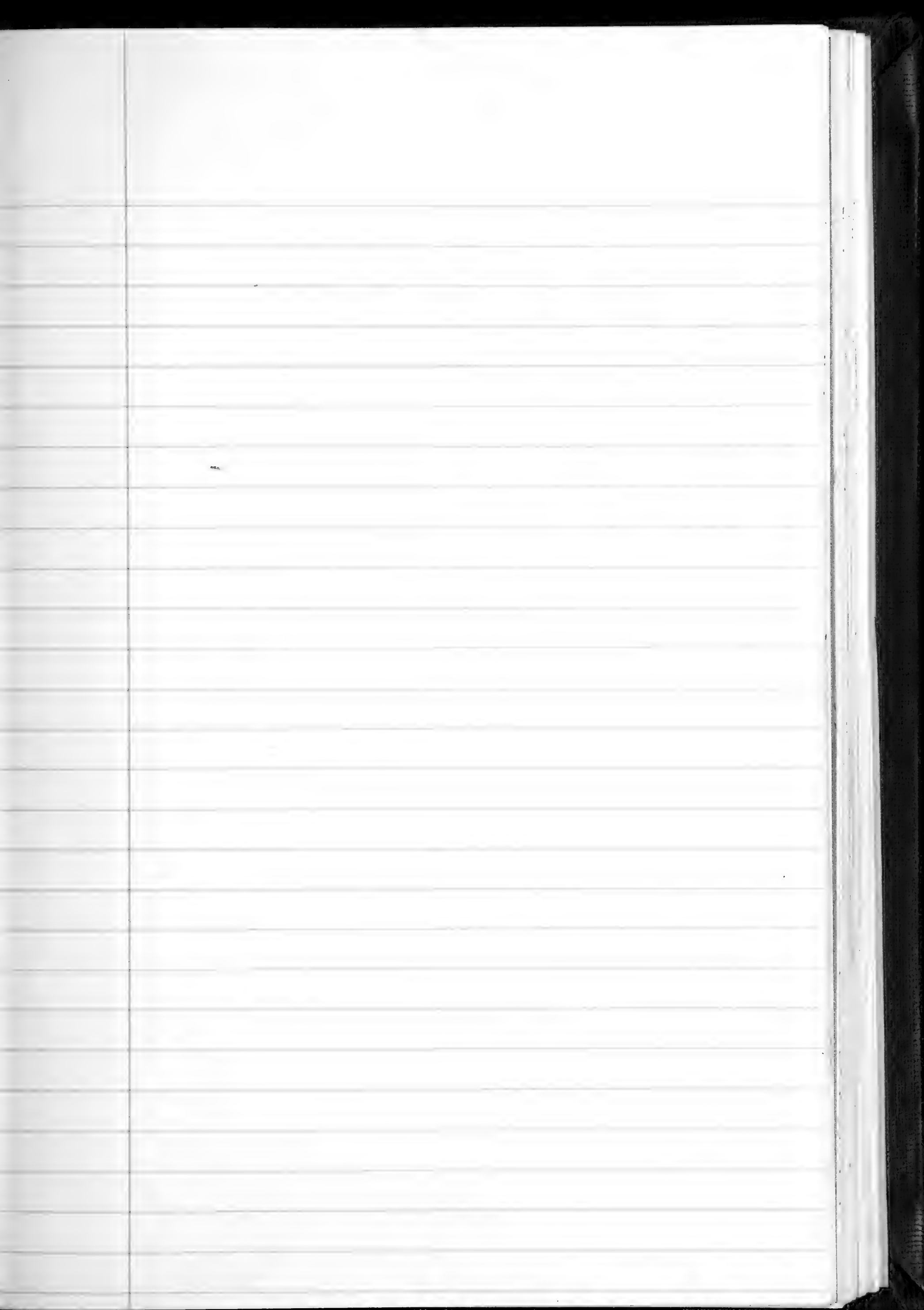
Bullock Oriole

Valley Quail

Red-Winged Blackbird

Lazuli Bunting

Meadowlark





V. Memmles
1991

Baird Cormorant

May 20, Coast west and north of Russian
Gulch State Park, Mendocino Co., Calif.

6:00 A.M.
Sun out

Several large black birds seen
in flight and resting on the water
of the ocean. They have a white
rump patch but are dark otherwise.

May 21, Sun Shining

6:00 A.M. About 8 or 10 birds observed some

resting on water and some
in flight. They fly with a slow
regular wing beat. The neck is
stretched straight out in front.
The rate of flight is much
slower than that of the Pigeon-
Guillemot which are very
abundant here too.



V. Memmlev
1941

Cutamias townsendii

May 23, Russian Gulch State Park, Mendocino Co., Calif.
elev. 400 ft.

Two traps set on top of large fallen log on May 22nd were discovered to have caught a ♂ and a ♀ Cutamias. The logs were about 25 ft. apart in a mixed habitat between the Redwood forest and the pine Barrens north of Russian Gulch. The logs were in an open space full of ferns and low shrubs and were in the sunshine most of the day. Yesterday we observed a live Cutamias sitting on a dead tree in the pine barrens. He froze while we observed him and remain so until closely approached.

V. Mummler
1941

Kingfisher

May 30, Russian Gulch State Park, Mendocino Co., Calif.
2:30 P.M. 40' elev. Raining.

Bird seen in flight about 3 yds
about the ground. Upper parts
dark grey. A white ring around
back of neck. Bird glided
out of sight toward the stream.



V. Thimmler
1941

Mustela

May 30, Russian Gulch State Park, Mendocino Co., Calif.
elev. 75' Rained all day until 2:00 P.M.
It had just stopped raining when
Mrs. Grinnell suggested that we look
at the traps which she had set
in the Redwoods north of camp. 2
Steel traps and 1 rat trap had
been scented with Weasel scent.
The steel traps were un sprung.
The Rat trap, placed in a hollow
burned stump was found to
contain a young Weasel. His belly
was a cream-color and his upper
parts a milk-chocolate brown.
He was still alive when found and
squeezing over the lungs was
not successful in killing him.
He was finally killed by striking
him across the back with a stick
and breaking his back. He had been
caught across the neck. The Redwood
forest here is moderately dense. There
are many fallen logs. These are
covered with moss. The ground has
a dense layer of needles and
old ferns.

V. Merrillee
1941

Neotoma fuscipes

May 22,

Russian Gulch State Park, Mendocino Co., Calif.
500' elev. Clear, sunshining.

A rat trap set on a log yesterday evening was left until this evening when a Woodrat was found caught. The trap was set where a Chipmunk had been seen. The habitat was very mixed. It was between the strictly Redwood forest below and the pine barrens above. Bishop pines, Cypripedium pygmaea, Pinus contorta var. bolanderi, and Deer fern are dominant in the vegetation. The animal caught was a mature ♂. No Nests were found near where the animal was trapped. The area is located about 1 mile from the camp grounds in the gulch via the north trail to the pine barrens.

May 26,

Elev. 200' upper hill slopes south of gulch off old road back of Recreation hall. One trap set about 2 yds off the road in a good Woodrat habitat, much dead undergrowth, caught a wood rat but only the entrails and some fur remained of it. Two traps set off the road



O. Mammul
1941

2.

Neotoma fuscipes

May 26, Russian Gulch State Park, Mendocino Co. Cal. 300' elev
about 40 yds. and 10 and 20 paces
from a large house caught an adult ♀
and an immature ♀ respectively. The
latter was somewhat mutilated by another
animal but was still good enough to
put up.

May 27, A trap set about 20 paces off the old
road and about 2 paces from a
Woodrat's nest. The trap caught
an adult ♀. A trap was
also set in the same locality
as on May 26 near the nest
which caught 2 ♀ the day before.
The trap was sprung and the
bait eaten. The ♀ caught today had
2 5mm. embryos.



J. Mammals
1941

Neurotrichus gibbsii

May 19, Russian Gulch State Park, Mendocino Co., Calif., elev. 400 ft.

One Shrew-mole caught in a Marginal Riparian habitat. 23 traps were set with a total catch of 11 individuals and 4 species other than the Shrew-mole. Dominant vegetation was: Thimbleberry, Salmonberry, and Nettles.

May 22, Three males were caught in a Riparian - marginal habitat.

37 traps were set, 10 animals caught representing 3 other species and Neurotrichus.

May 24, There were 24 traps set, 3 caught Neurotrichus and 4 other caught other animals of 3 other species. The habitat again was Riparian - marginal.

May 30, Two males were caught in a meadow between the road and a stream. 23 traps were set in this habitat. One Zapus was also caught.



V. Mearns
1941

Odocoileus hemionus

May 21, Russian Gulch State Park, Mendocino Co., Calif. elev. 500 ft.

While passing southward down an old lumber road connecting the Pine Barrens and the trail to the falls, I saw the retreating hindquarters of a deer, its white rump patch very much in evidence. It was on the opposite side of the ravine from the road on which I was standing. The habitat was a coniferous forest. Redwood, Douglas fir and Coast hemlock were dominant.

May 27, While walking eastward on the old road leaving the Circle at the end of the Russian Gulch road, I saw several deer tracks. These were very distinct and placed in mud of a plastic nature. The road passed thru a new growth Douglas fir and Redwood forest. Many old snags are standing and appear to have been burned.



V. Memmler
1991

Peromyscus maniculatus

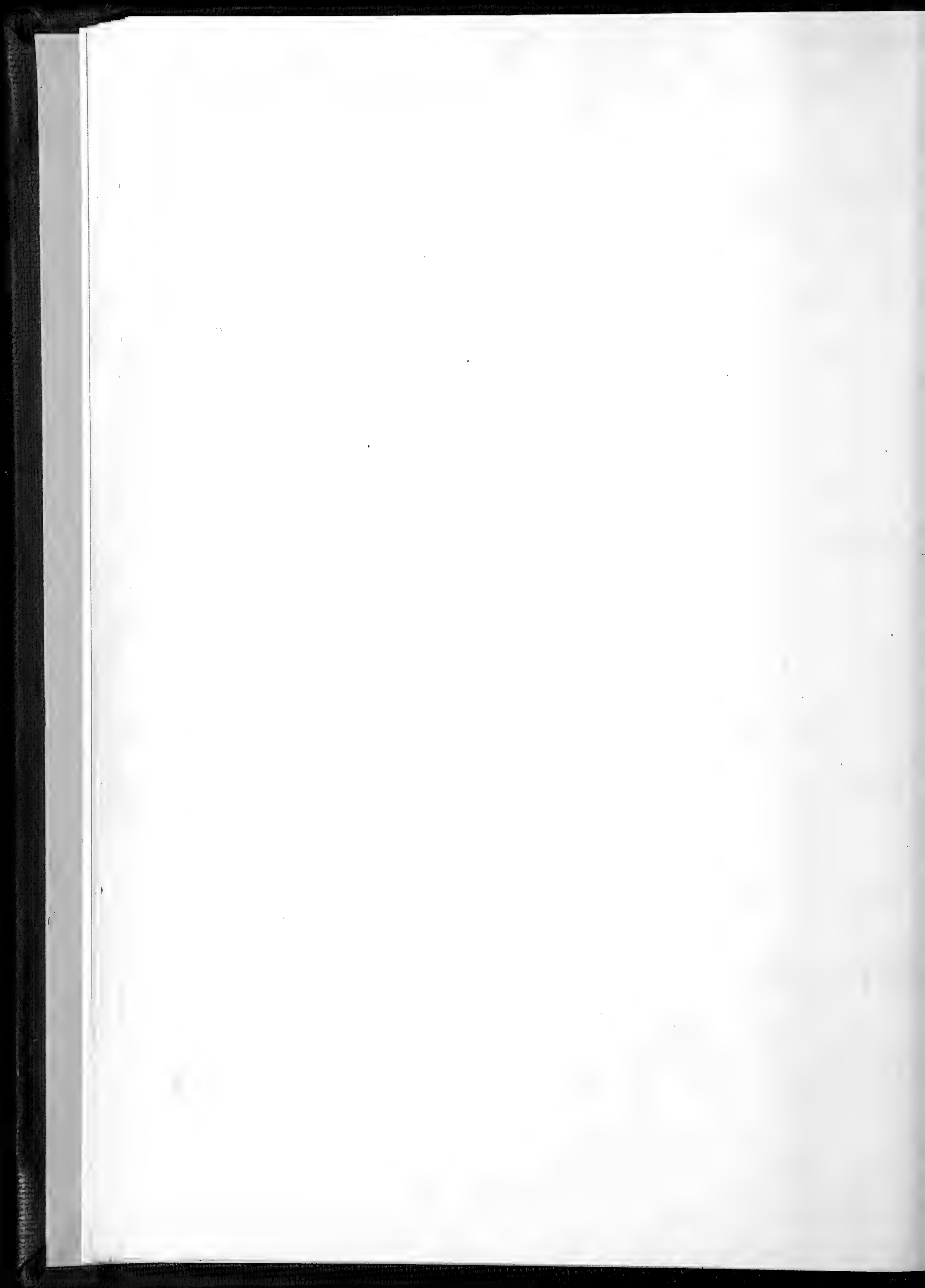
May 17, Russian Gulch State Park, Mendocino Co.,
California, elev. 40 ft.

Out of 31 traps set in a Riparian -
marginal habitat there were 7 Peromyscus
and 4 other species making 8 ^{other} individual
animals. Dominant vegetation
was: Salmonberry, Thimbleberry,
Blackberry, and Nettle. All 7
were ♂'s.

May 18, Traps, 26 in number were set the evening
before. 6 P. maniculatus and 2 other
animals were caught, each a different
species. The habitat was the
same but east rather than west from
camp along the stream.

May 19, Traps, 23 in number were set
and caught 11 animals, 6 were
Peromyscus. The habitat was the
same and the spacing the same
as May 17 and 18.

May 20, Of 22 traps set, there were 10 catches.
3 of these were P. maniculatus ♂'s.
The habitat and spacing of traps was
the same as on May 17.



W. Memmner
1921

Pigeon Guillemot

May 24, Russian Gulch State Park, Mendocino Co.,
Calif., Sea Coast on point north of
outlet of Russian Gulch stream.

5:30 A.M. Overcast.

Several birds seen in flight over ocean to have white wing patches, others were dark. They have a rapid wing beat.

6:00 A.M. 2 Bird observed swimming in a cave thru the rock, both ends opening on the sea. Birds are about the size of a Coot. They have bright red-orange webbed feet and legs. The white patches on the wings are large about 2-3 inches long and about $1\frac{1}{2}$ " broad. One bird was floating on the water and being carried forward and back by the surging of the sea. Another bird came into view from under the water, rose to the surface and flew to a nearby crevice in the rock. The gave a piercing screeching note at irregular intervals which echoed about in the cave.



V. Merriam
1941

Band-tailed Pigeon

May 23, Russian Gulch State Park, Pine Barrens,
Mendocino Co., Calif. elev. 500'

1:30 PM. Sunshining

About 150 or more birds were perched on Pinus muricata trees and old snags. They were frightened by our approach and took to the wing. They make a flapping noise in flight as if their wings were clapping together above or below. The noise is especially obvious as the bird begins to fly. When established in flight the clapping noise occurs only rarely. Their flight has a very rapid wing beat.



V. Mearns
1991

Reithrodontomys megalotis

May 29, Russian Gulch State Park, Mendocino Co., Calif. 40' elev.

23 traps were set in a Marginal
Riparian habitat. 5 traps
were sprung and 6 others
contained animals. There was
one ♂ Reithrodontomys, and
4 Peromyscus and 1 Microtus.



V. Mammals
1941

Sorex Pacificus

May 17, Russian Gulch State Park, Mendocino Co., California elev. 40 ft.

Out of 31 traps set in a Riparian Marginal habitat, 4 caught Sorex pacificus.

The dominate plants were: Thimbleberry, Salmonberry, Nettle and Blackberry.

The one which I put up was a ♂.

Of the three others one was a female and the other two were males.

May 20, Out of a trap line of 22 traps there were 10 catches. One of these was a Sorex pacificus. Traps were set along the same line and in the same habitat as on May 17.

May 22, Out of 37 traps set 10 caught animals, one of these a ♀ S. pacificus. 3 other species were also caught. The habitat was identical to that set on May 17.

May 25, Out of 24 traps set in a Riparian - Redwood habitat, one caught a ♂ Sorex pacificus. There were 9 other animals caught and 2 other species. Elevation was about 75 ft.

May 26, Out of 24 traps set along the margin of a large meadow in Thimbleberries, 1 trap caught a Sorex pacificus. There were 4 other



V. Mammals
1991

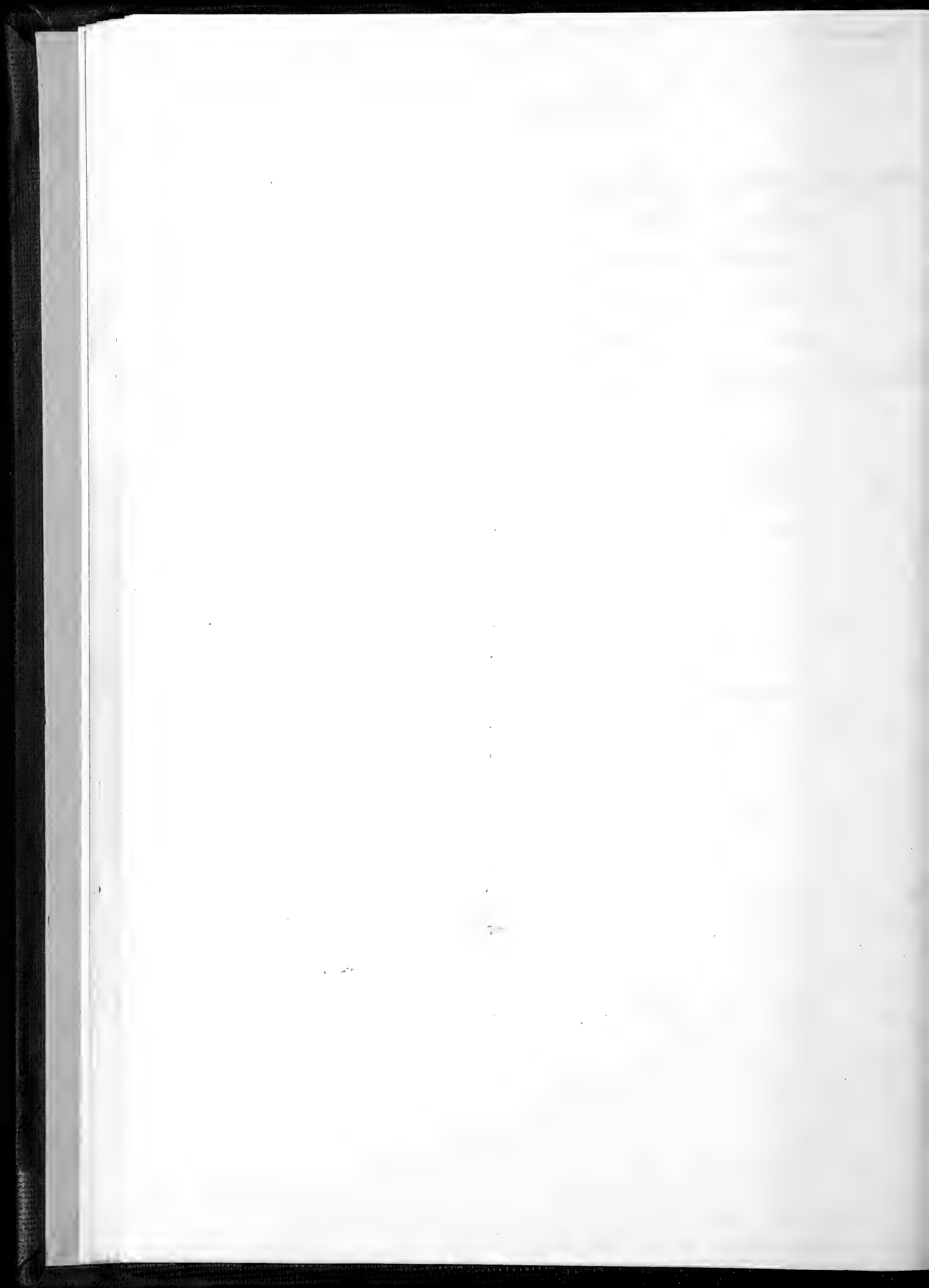
2.

Sorex pacificus

May 26, Russian Gulch State Park, Mendocino Co., Calif.
elev. 200'

individual animals caught here and 2 other species, Thaps and Peromyscus.

May 27, One ♀ Sorex pacificus was caught in a trap set in a grass open space in a Bishop pine clump where Skunkbushberry and wild rose formed the underbrush. 12 other traps set here did not catch any animals. 4 traps were sprung.



V-Mammals
1941

Sorex trowbridgii

May 17, Russian Gulch State Park, Mendocino Co., Calif. elev. 40 ft.

Last evening 31 traps were set at 10 pace intervals. There were 2 Sorex trowbridgii out of 12 animals caught. The habitat was a Riparian marginal habitat.

Dominant vegetation: Thimbleberry, Salmonberry, Blackberry, Nettle, and alum root. The specimen was an adult ♀ with no embryos which I put up. The other was the same.

May 20, Similar habitat trapped again with same spacing of traps. 22 sets and 10 catches. One was a S. trowbridgii.



V. Memmley
1941

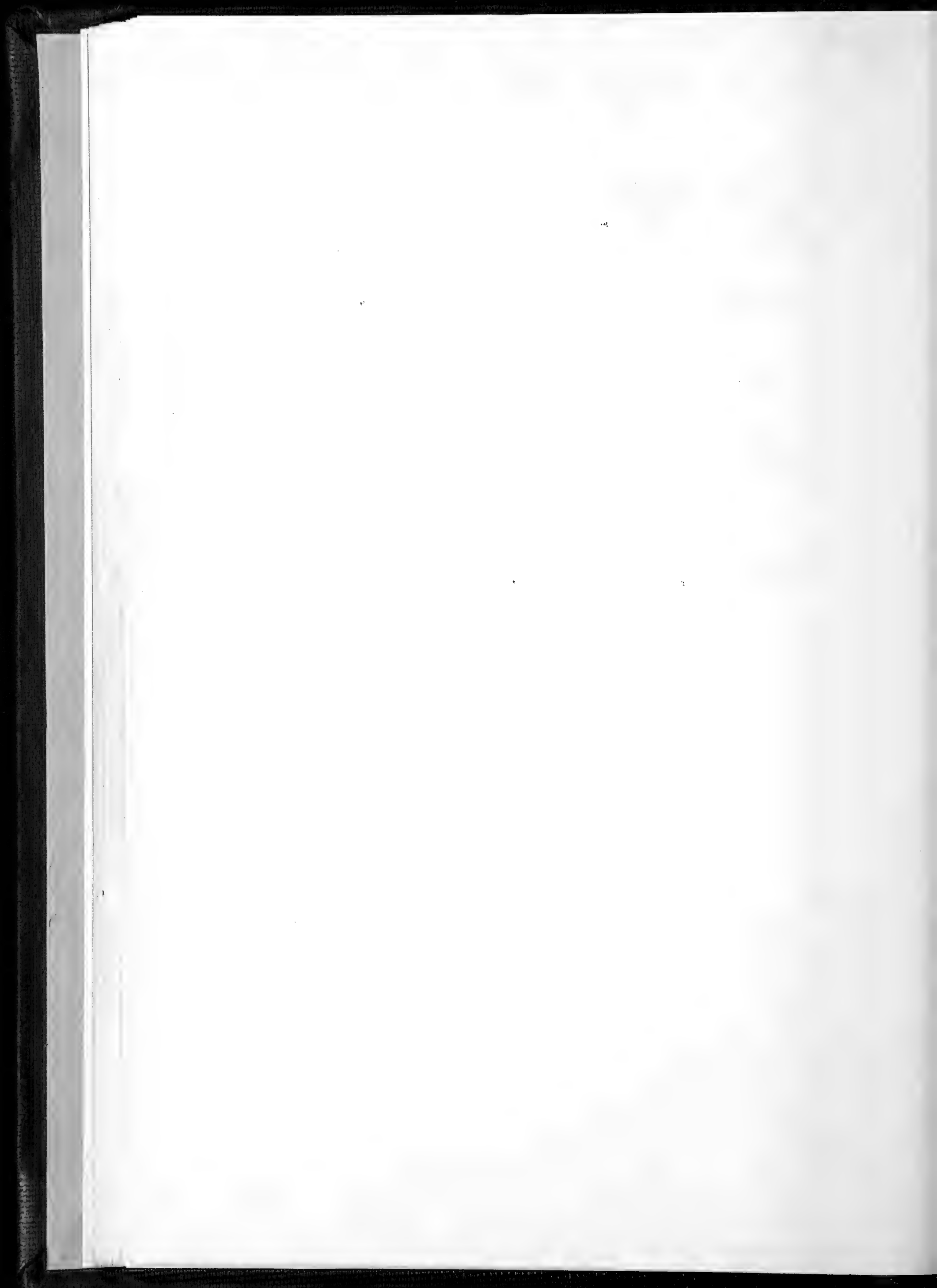
Sorex vagrans

May 17, Russian Gulch State Park, Mendocino Co, Calif.
elev. 40 ft.

Out of 31 traps set there were 12 catches.
one of these was a Sorex vagrans.

The habitat was marginal riparian.
Dominant plants included: Salmon
berry, Thimbleberry, Nettle, Blackberry,
and Alum root. The animal seemed
to be an adult female without embryos.

May 18, 26 traps were set out in a Riparian-Marginal
habitat.



V. Mearns
1941

Russet-backed Thrush

May 19, Russian Gulch State Park, Mendocino Co., Calif.
elev. 40 ft.

Bird trapped in a mouse trap set in
a marginal riparian habitat.

Back of bird a uniform color of brown-
olive from head to tip of tail.

Throat and breast light with rust-brown
spots. Dominant plants: Thimble

berry, Salmon berry, and Nettle.

Bird was an adult ♂ at full height
of the breeding season.



V. Merriam
1941

Thamnophis

May 16, Russian Gulch State Park, Mendocino Co.,
California, elev 70 ft.

Snake caught in meadow-grass. Measured
only 355 m.m.



V. Menninger
1941

California Woodpecker

May 22, Russian Gulch State Park, Mendocino Co., Calif.
elev. 75 ft.

A pair of California woodpeckers were observed at wood in the vicinity of the road which passes under the bridge at the entrance to the park. They flew between two Jan Oak trees and drilled in one of them. The red top of the head was seen thru field glasses.

May 29, Russian Gulch State Park Mendocino Co. Calif
2:50 PM South trial branch to the west. $\frac{1}{4}$ mile from beginning. Bird perched on lowland fir in forest of Redwood, Douglas fir, lowland fir and Coast Hemlock. Bird uttered loud harsh crys at intervals, then flew to another tree. He then took off in flight westward toward a clearing which opened into a large open grassy slope.

V. Memmles
1991

Zapus orarius

May 18, Russian River State Park, Mendocino Co., Calif. elev. 70 ft.

A trap was set in a Riparian marginal habitat in the evening and the specimen was found in the morning. This was one of 26 traps set. Other catches in the same line were: 1 Sorex and 6 Peromyscus maniculatus. Plants included in the habitat in abundance were Thimbleberry, Salmonberry, Nettle, Blackberry and Alum Root. The specimen caught was an adult ♀ and contained 6 embryos in early stages of development.

May 19, Another specimen obtained in a trap set in a drain leading to a stream. Another animal had preceded us however and succeeded in completely devouring half of the Zapus. The habitat + plant were the same as the night before. The ground was moist on both days.

May 20, 3 ♂ Zapus were caught in a Riparian marginal habitat in the same line as set on May 16th. There were 22 traps set and 7 other individuals representing 4 other species.

May 22, 1 ♂ Zapus was caught by one of 37 traps set in a Riparian-marginal habitat. There were 9 other catches and 3 other sp.

V. Menninger
1941

2.

Zapus orarius

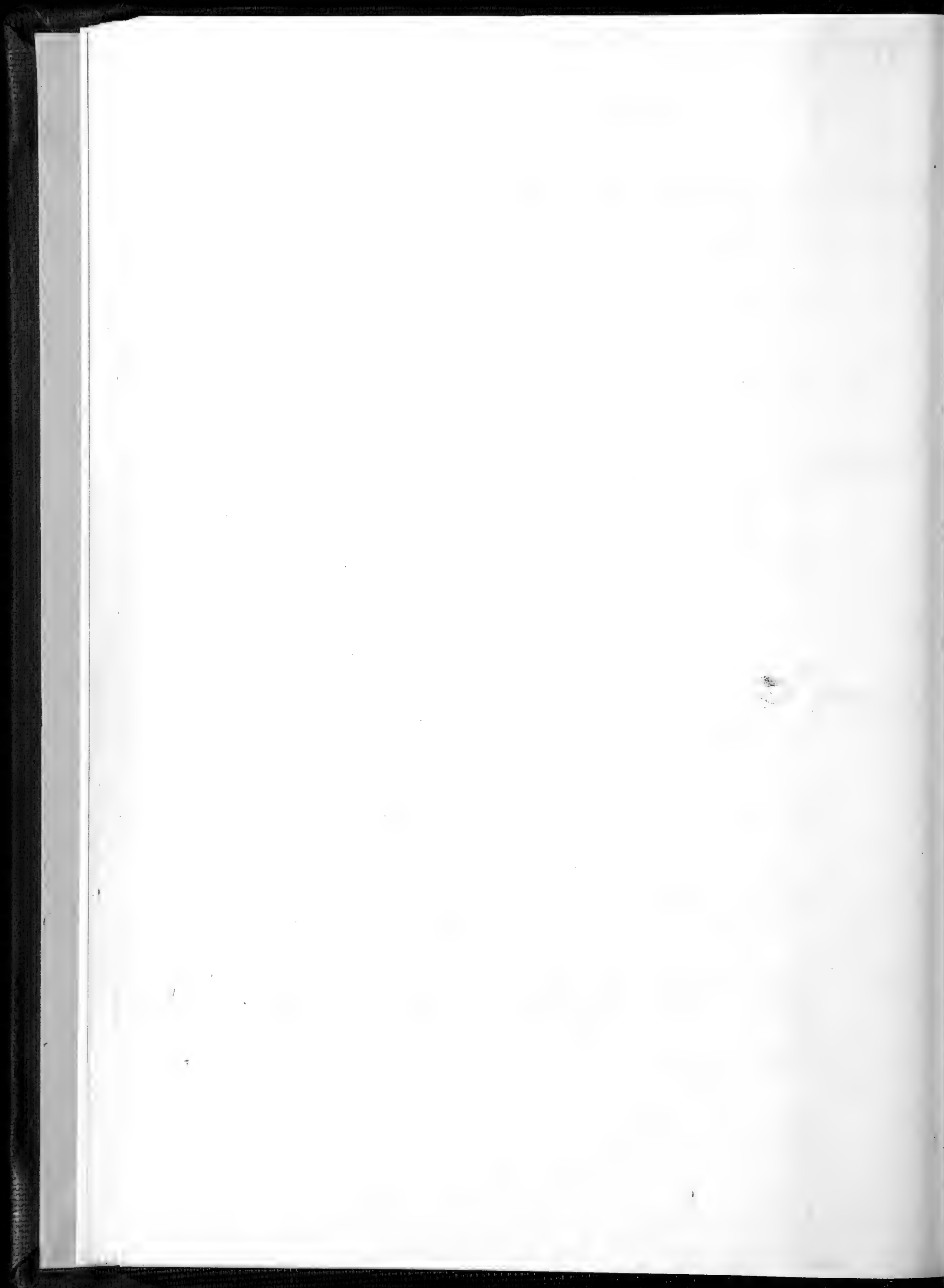
May 24, Russian Gulch State Park, Mendocino Co.,
Calif. elev. 70 ft.

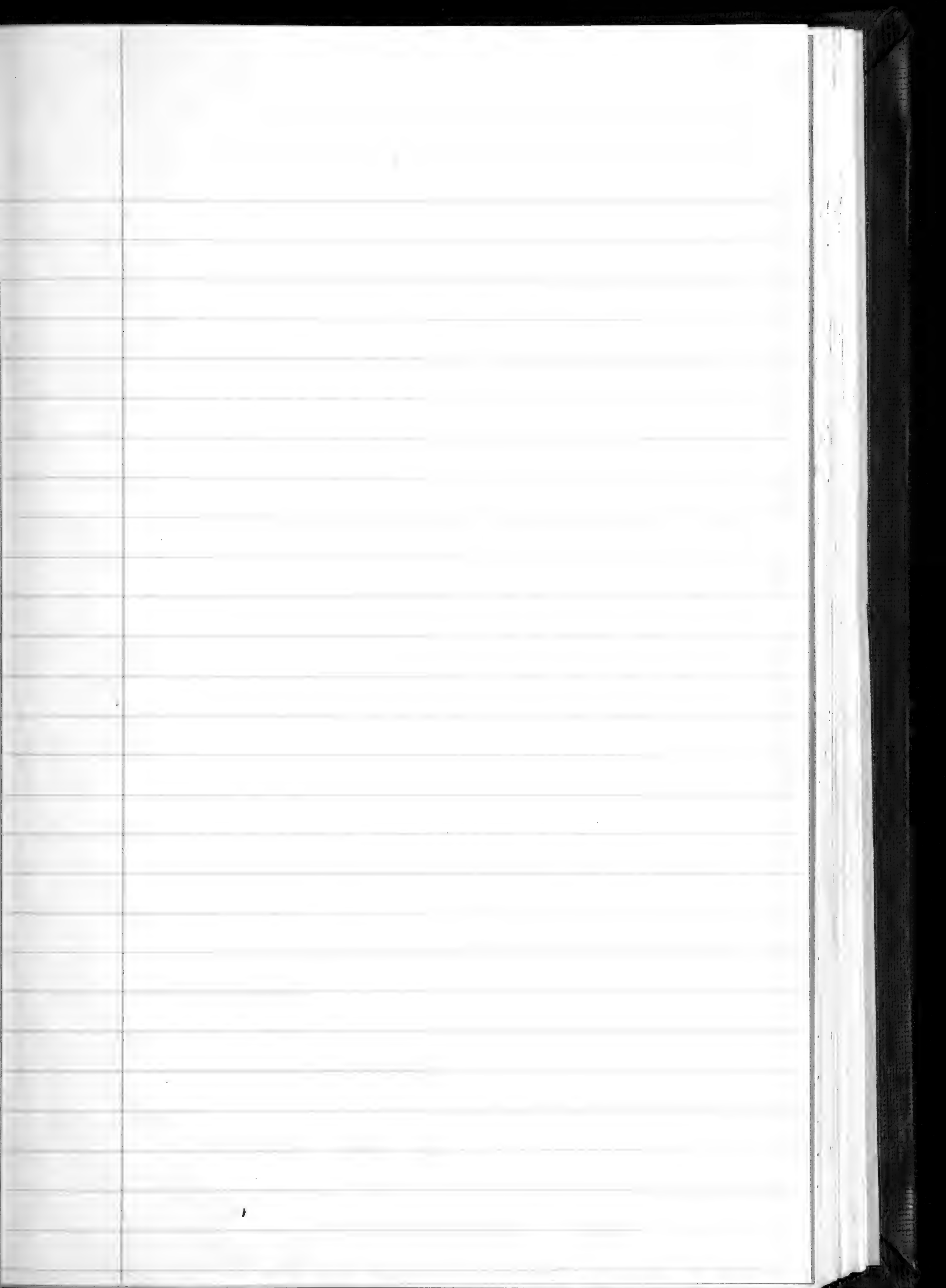
One ♂ Zapus was caught in a Riparian marginal habitat as on May 18. There were six other animals caught representing 3 other species. There were 24 traps set.

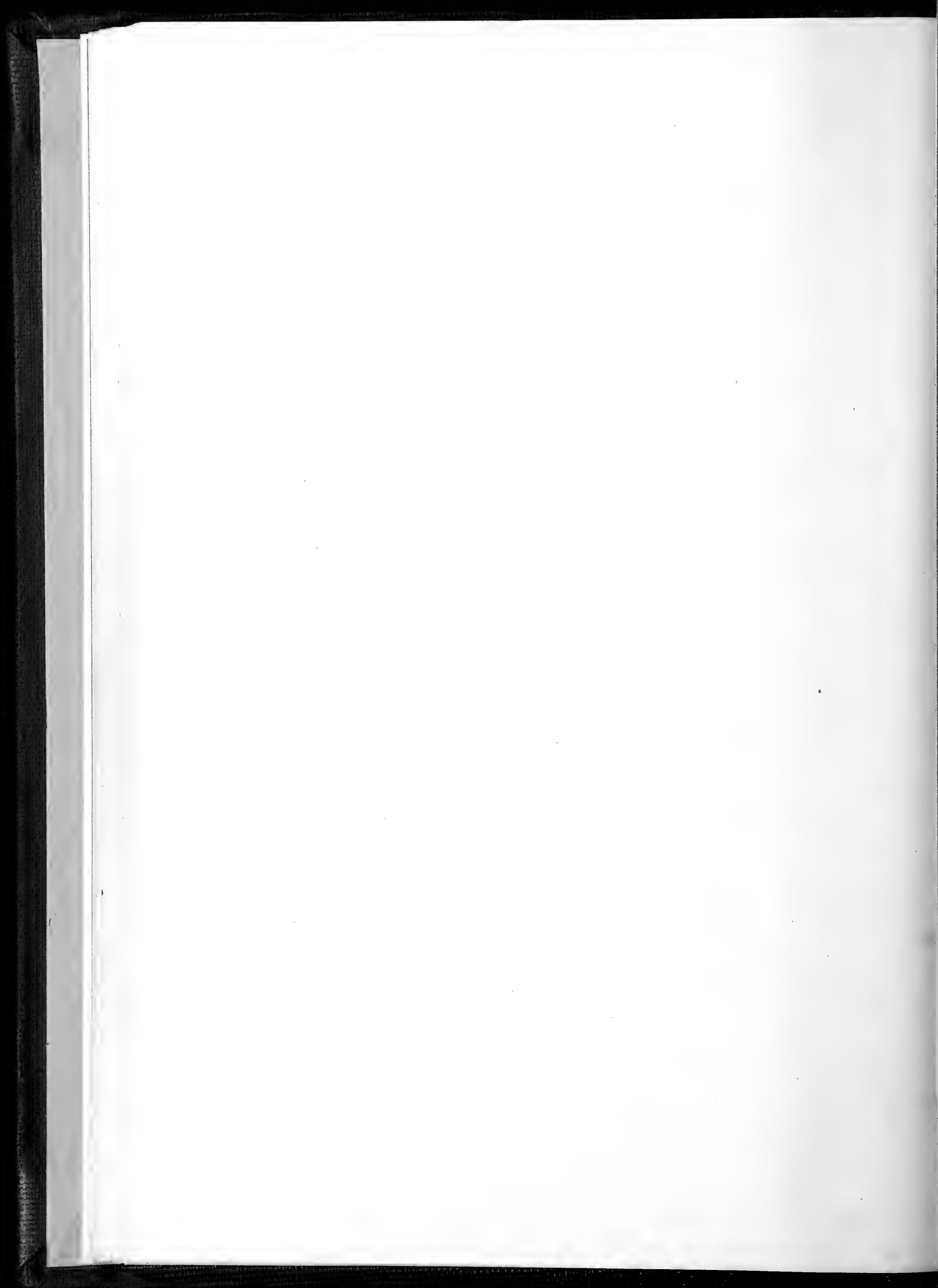
May 26, elev. 200 ft.

One ♀ Zapus was caught in a Thimbleberry clump at the edge of a meadow. There were 5 traps set in similar spots but none other caught a Zapus.

May 30, One ♂ Zapus was caught in a meadow in the gulch between the road and the stream. The trap was set in what appeared to be a Microtus runway. There were 23 traps set in this habitat. Two ♂ Neurotriches were also caught. 5 traps had feces on them and the bait eaten off.







Memmler, V.

1942

Monterey Co., Calif.

April 1-10



Memmler, H.

1942

Monterey Co., Calif.

April 1st - 10, 1942

Cat. of Spec. #95-143; itinerary; species accounts

* Note -

Locality data furnished by A. C. Hawbecker Jr. on July 20, 1945 indicates that this should be: Berglund Ranch, 1250 ft., 2 mi. NW Corralitos, Santa Cruz Co., Calif. Catalog + specimen labels changed accordingly by J. B. Palmer.

V. Mammiller
1942

Catalog

note x

1250 ft. 2 mi. NW.

April 1, Berglund Ranch, 1450 ft., 5 mi. N Corralitos, Santa Cruz Co., Calif.

75	♀ no embos.	<u>Dipodomys</u>	296-183-44-20-17 ^{n c}	, 71.1g
76	♀ no embos.	<u>Reithrodontomys</u>	135-69-17-15-12 ^{n c}	, 7.5g
77	♀ 5 embos. 8 m.m.	<u>Microtus</u>	150-44-21-17-12 ^{n c}	, 31.6g
78	♂	<u>Peromyscus californicus</u>	249-138-28-25-24 ^{n c}	, 49.9g
79	♀ no embos.	<u>Peromyscus californicus</u>	239-131-28-25-23 ^{n c}	, 41.1g
80	♀ no embos.	<u>Peromyscus maniculatus</u>	161-66-21-18-17 ^{n c}	, 18.3g

April 2, 81	♂	<u>Dipodomys</u>	301-182-44-19-16 ^{n c}	, 71.5g
82	♀ 2 embos.	<u>Dipodomys</u>	295-179-41-20-15 ^{n c}	, 64.7g
83	♀ no embos.	<u>Microtus</u>	177-49-22-18-14 ^{n c}	, 68.7g
84	♂ Im.	<u>Sylvilagus</u>	179-10-45-41-47 ^{n c}	, 114.8g
85	♀ no embos.	<u>Peromyscus californicus</u>	267-142-27-25-23 ^{n c}	, 50.5g
86	♂ (col. by H. W. Grinnell)	<u>Peromyscus</u> ?	190-92-23-24-20 ^{n c}	, 24.8g
87	♂ (col. by H. W. Grinnell)	<u>Thomomys</u>	237-72-30-17 ⁿ	, 219.5g
88	(col. by H. W. Grinnell)	<u>Sceloporus</u>		
89	(col. by H. W. Grinnell)	<u>Sceloporus</u>		
90	(col. by H. W. Grinnell)	<u>Sceloporus</u>		
91	(col. by H. W. Grinnell)	<u>Sceloporus</u>		
92	(col. by H. W. Grinnell)	<u>Sceloporus</u>		
93	(col. by H. W. Grinnell)	<u>Sceloporus</u>		
94	(col. by H. W. Grinnell)	<u>Hyla</u>		

April 4, Mud Creek, 800 ft., 3 1/2 mi. SW San Juan, Monterey Co., Calif.

95	♂ (col. by H. W. Grinnell)	<u>Thomomys bottae</u>	254-68-32-8 ⁿ	, 261.2g
96	(col. by H. W. Grinnell)	<u>Sceloporus</u>		
97	(col. by H. W. Grinnell)	<u>Batrachoseps</u>		
98	(col. by H. W. Grinnell)	<u>Sceloporus</u>		
99		<u>Iriturus</u>		



V. Memmler
1942

Catalog

April 5, mud Creek, 800 ft., 3½ mi. SW San Juan, Monterey Co., Calif.

100 Cuscutina Orange below, violet red-violet above.

101 ? Sorex 116-46-15-ⁿ6

102 ♀ ^{no} embos. Sorex 109-42-14-ⁿ6

April 7, muddy Creek, 1000 ft., 1 mi. S Chualar Canyon, Monterey Co., Calif.

103 ♂ Reithrodontomys 143-67-18-15-ⁿ11^c, 8.3g

104 ♀ Im. Neotoma 243-112-37-28-22ⁿ^c, 76.3g

1100 ft.

105 ♂ Peromyscus truei 183-94-23-25-20ⁿ^c, 29.5g

1400 ft.

106 ♂ Peromyscus maniculatus 157-71-21-17-15ⁿ^c, 20.4g

107 ♂ Peromyscus maniculatus 154-69-21-17-15ⁿ^c, 21.6g

108 ♂ Peromyscus truei 181-90-24-25-24ⁿ^c, 25.8g

109 ♀ ^{2 embos.} 8mm Peromyscus californicus 248-135-27-26-24ⁿ^c, 47.8g

muddy Creek, 750 ft., Chualar Canyon, Monterey Co., Calif.

110 ♀ ^{no} embos. ^(col. by H. W. Grinnell) Thomomys bottai 193-47-25-10ⁿ, 126.2g

111

Bufo

April 8, muddy Creek, 1,000 ft., 1 mi. S Chualar Canyon, Monterey Co., Calif.

112 ♂ Reithrodontomys 148-76-17-15-13ⁿ^c, 9.9g

113 ♂ Reithrodontomys 146-76-17-15-13ⁿ, 9.9g

114 ♂ Perognathus 195-107-25-12-10ⁿ^c, 20.7g

115 ♀ ^{no} embos. Peromyscus maniculatus 145-59-20-16-14ⁿ^c, 14.8g

116 ♀ ^{no} embos. Peromyscus truei 185-96-23-25-22ⁿ^c, 22.7g

April 9, muddy Creek, 1,000 ft., 1 mi. S Chualar Canyon, Monterey Co., Calif.

117 ♂ Sorex 99-35-11-7ⁿ, 7.2g

118 ♀ ^{no} embos. Reithrodontomys 143-76-18-15-13ⁿ^c, 10.1g

119 ♂ Reithrodontomys 133-72-17-15-12ⁿ^c, 8.5g

120 ♀ ^{no} embos. Reithrodontomys 140-77-17-14-12ⁿ^c, 7.7g



V. Mammeler
1942

Catalog

April 5, mud Creek, 800 ft., 3½ mi. SW San Juan, Monterey Co., Calif.

100 Onychomys Orange below, violet red-violet above.

101 ? Sorex 116-46-15-6ⁿ

102 ♀ ^{no} emb. Sorex 109-42-14-6ⁿ

April 7, muddy Creek, 1000 ft., 1 mi. S Chualar Canyon, Monterey Co., Calif.

103 ♂ Reithrodontomys 143-67-18-15-11ⁿ , 8.3g

104 ♀ Im. Neotoma 243-112-37-28-22ⁿ , 76.3g

1100 ft.

105 ♂ Peromyscus truei 183-94-23-25-20ⁿ , 29.5g

1400 ft.

106 ♂ Peromyscus maniculatus 157-71-21-17-15ⁿ , 20.4g

107 ♂ Peromyscus maniculatus 154-69-21-17-15ⁿ , 21.6g

108 ♂ Peromyscus truei 181-90-24-25-24ⁿ , 25.8g

109 ♀ ^{2 emb.} 8mm Peromyscus californicus 248-135-27-26-24ⁿ , 47.8g

muddy Creek, 750 ft., Chualar Canyon, Monterey Co., Calif.

110 ♀ ^(col. by H. W. Grinnell) ^{no} emb. Thomomys bottae 193-47-25-10ⁿ , 126.2g

1000 ft.

111 Bufo

April 8, muddy Creek, 1000 ft., 1 mi. S Chualar Canyon, Monterey Co., Calif.

112 ♂ Reithrodontomys 148-76-17-15-13ⁿ , 9.9g

113 ♂ Reithrodontomys 146-76-17-15-13ⁿ , 9.9g

114 ♂ Perognathus 195-107-25-12-10ⁿ , 20.7g

115 ♀ ^{no} emb. Peromyscus maniculatus 145-59-20-16-14ⁿ , 14.8g

116 ♀ ^{no} emb. Peromyscus truei 185-96-23-25-22ⁿ , 22.7g

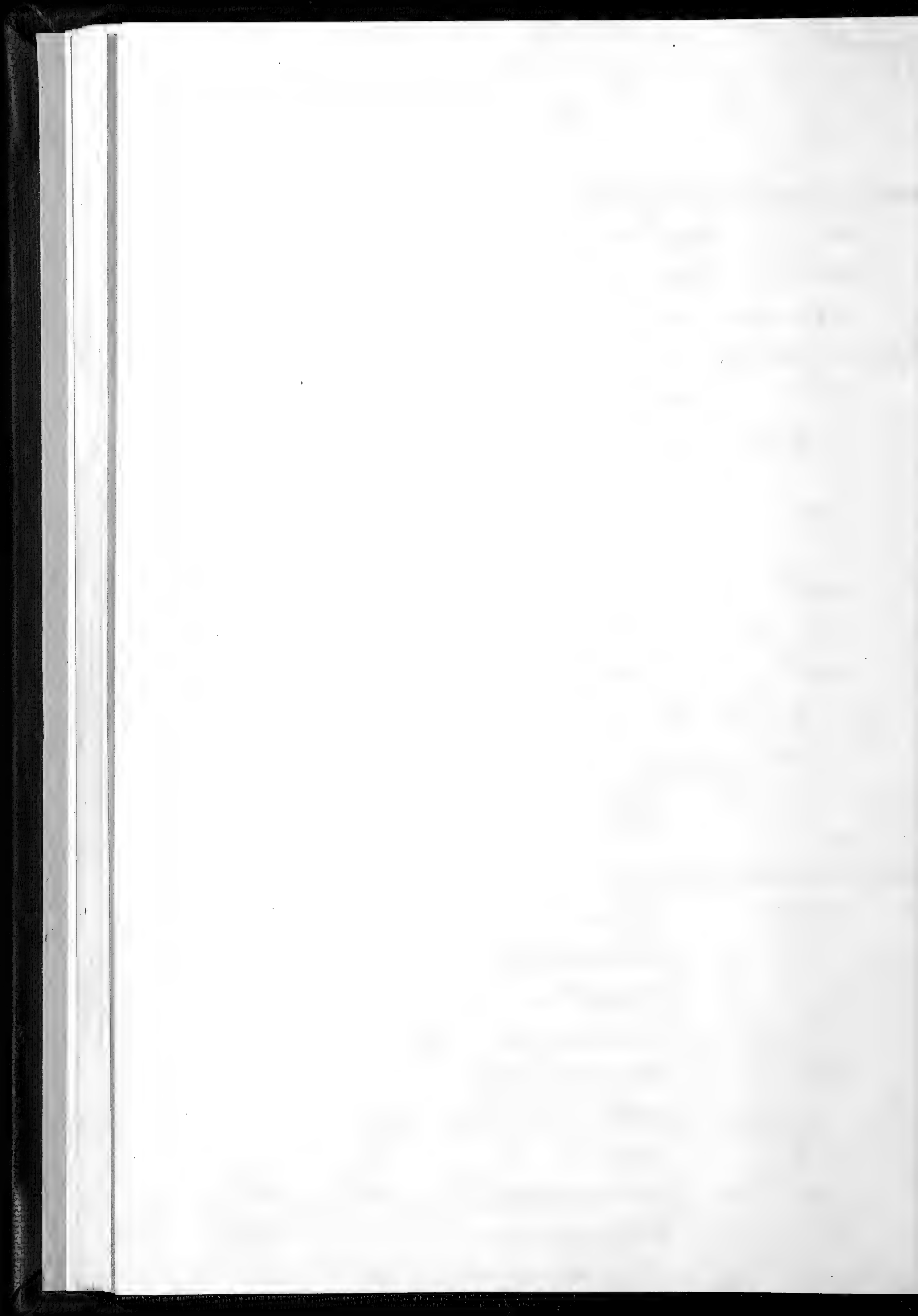
April 9, muddy Creek, 1000 ft., 1 mi. S Chualar Canyon, Monterey Co., Calif.

117 ♂ Sorex 99-35-11-7ⁿ , 7.2g

118 ♀ ^{no} emb. Reithrodontomys 143-76-18-15-13ⁿ , 10.1g

119 ♂ Reithrodontomys 133-72-17-15-12ⁿ , 8.5g

120 ♀ ^{no} emb. Reithrodontomys 140-77-17-14-12ⁿ , 7.7g



Memmler
1942

Catalog

April 9, Muddy Creek, 1,000 ft., 1 mi. S Chualar Canyon, Monterey Co., Calif.

121	♂	<u>Reithrodontomys</u>	135-66-17-14-13 ^{n c}	, 8.9g
122	♂	<u>Reithrodontomys</u>	147-81-18-15-14 ^{n c}	, 9.6g
123	♂	<u>Microtus</u>	149-91-22-15-12 ^{n c}	, 35.9g

April 10, Johnson Ranch, 800 ft., Chualar Canyon, Monterey Co., Calif.

124	♂	<u>Reithrodontomys</u>	138-68-16-15-13 ^{n c}	, 10.9g
125	♂	<u>Reithrodontomys</u>	138-69-16-15-12 ^{n c}	, 10.2g
126	♂	<u>Perognathus</u>	203-109-26-12-9 ^{n c}	, 27.7g
127	♂	<u>Microtus</u>	137-40-21-15-12 ^{n c}	, 29.3g

April 19, Bald Peak, 1850 ft., 1 mi. E Berkeley, Contra Costa Co., Calif.

128		<u>Eumeces</u>		
129		<u>Eumeces</u>		
130		<u>Eumeces</u>		
131		<u>Eumeces</u>		
132		<u>Eumeces</u>		
133		<u>Eumeces</u>		
134		<u>Sceloporus</u>		
135		<u>Sceloporus</u>		

May 3, East Side Bald Peak, 1800 ft., 1 mi. E Berkeley, Contra Costa Co., Calif.

136		<u>Hyla</u>		
137		<u>Hyla</u>		
138		<u>Sceloporus</u>		
139		<u>Sceloporus</u>		
140		<u>Sceloporus</u>		
141		<u>Sceloporus</u>		
142		<u>Eumeces</u>		
143		<u>Eumeces</u>		



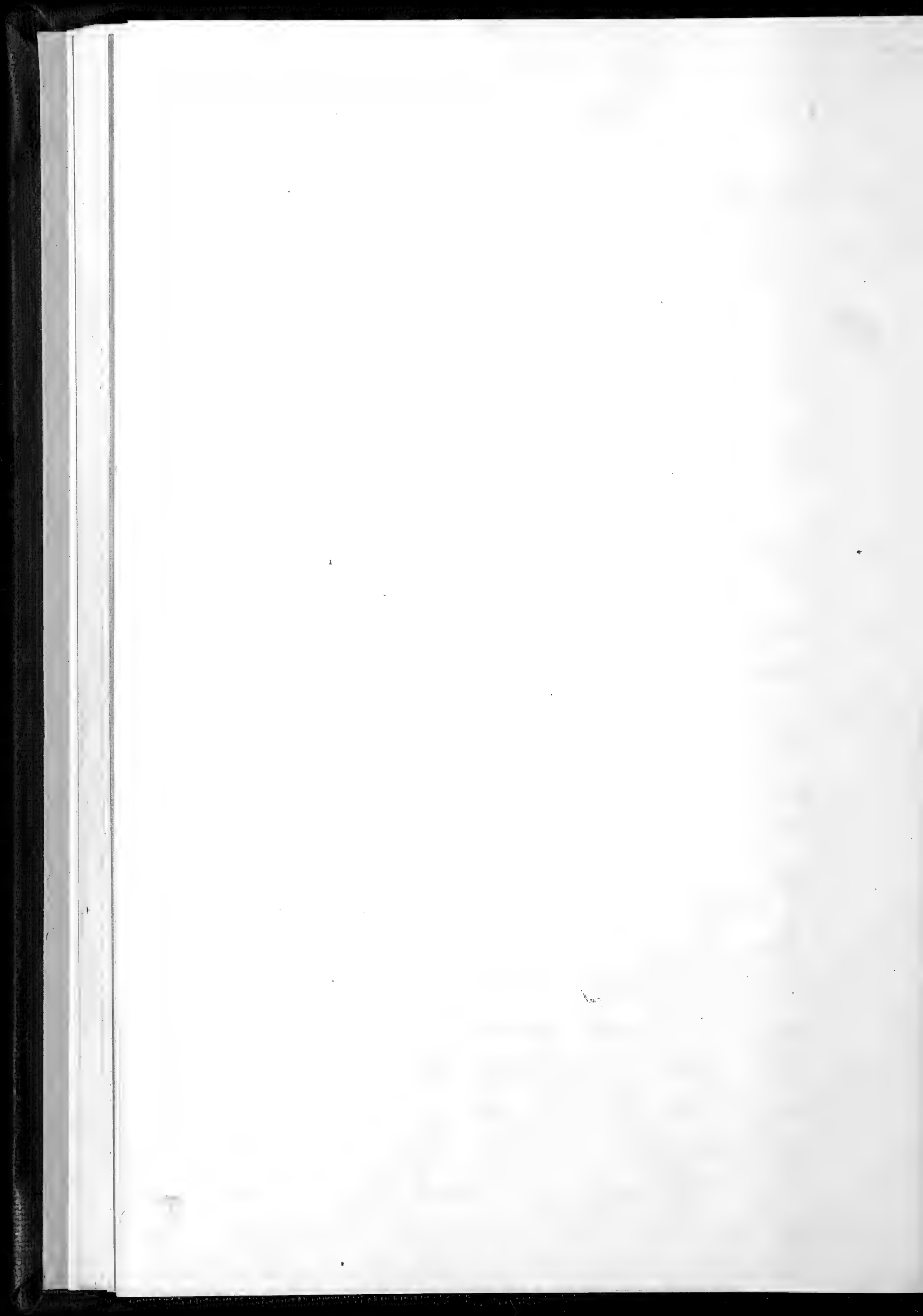
memoranda
1942

27

Itinerary

March 31,

A group of three: Mrs. Joseph Grinnell, Jean Boulware and myself left the University of California campus in Mrs. Grinnell's car, a Ford, at 7:15 A.M. We went thru San Leandro, Alameda, Centerville, Irvington, Warm Springs, Milpitas, San Jose, Morgan Hill and then took the cut off just beyond Morgan Hill to meet the Hecker Pass road from Gilroy. We followed this to Watsonville. In Watsonville we went to the U.S. Post Office in which building are the offices of the U.S. Soil Conservation Service. Here we met Mr. Hambecker, assistant soil conservationist for the Watsonville area. He most kindly escorted us to our present camp which is located 5 miles north of Corralitos on the Berglund Ranch. Mr. Hambecker also took us to the Cnos Ranch about a mile or more away to the South east. We took the Loma Prieta road from Corralitos to the Berglund Ranch and followed it for miles until we turned off on the Berglund Ranch road. Mr. Hambecker has trapped on both the Cnos and Berglund ranches



Memmler
1942

28.

Itinerary

March 31,

previously and caught Dipodomys
venustus on both. The Enos Ranch is
in open country previously cut out
from Redwood forest. There is not Redwood
in close to the Ranch. We saw some
sandy chaparral covered hills on
which Dipodomys were caught by
Mr. Hawbecker. The Berglund
Ranch is also cut out of Redwood
forest but its margins merge into
new Second Growth Redwood
forest which was timbered out about
60 years ago. The Ranch has many
apple trees planted in between
islands of Chaparral. There are
Redwoods on west, North and east
sides of the Ranch and a north facing
slope with Baccharis etc. Chaparral
most of the way up and grass meadow
and occasional Baccharis on top the
ridge.

April 1,

*See note in specimen catalog 1250 2 NW
Berglund Ranch, 1450 ft., 5 mi. N. Corralitos,
Santa Cruz Co., Calif.

Last evening Mrs. Ginnell, Jean Bouleware
and I set out 146 Museum Special traps.
Eight were placed across a strip of Chaparral
between apple orchards. There was a great deal
of Baccharis and Deer clover here. The soil



Memmler
1942

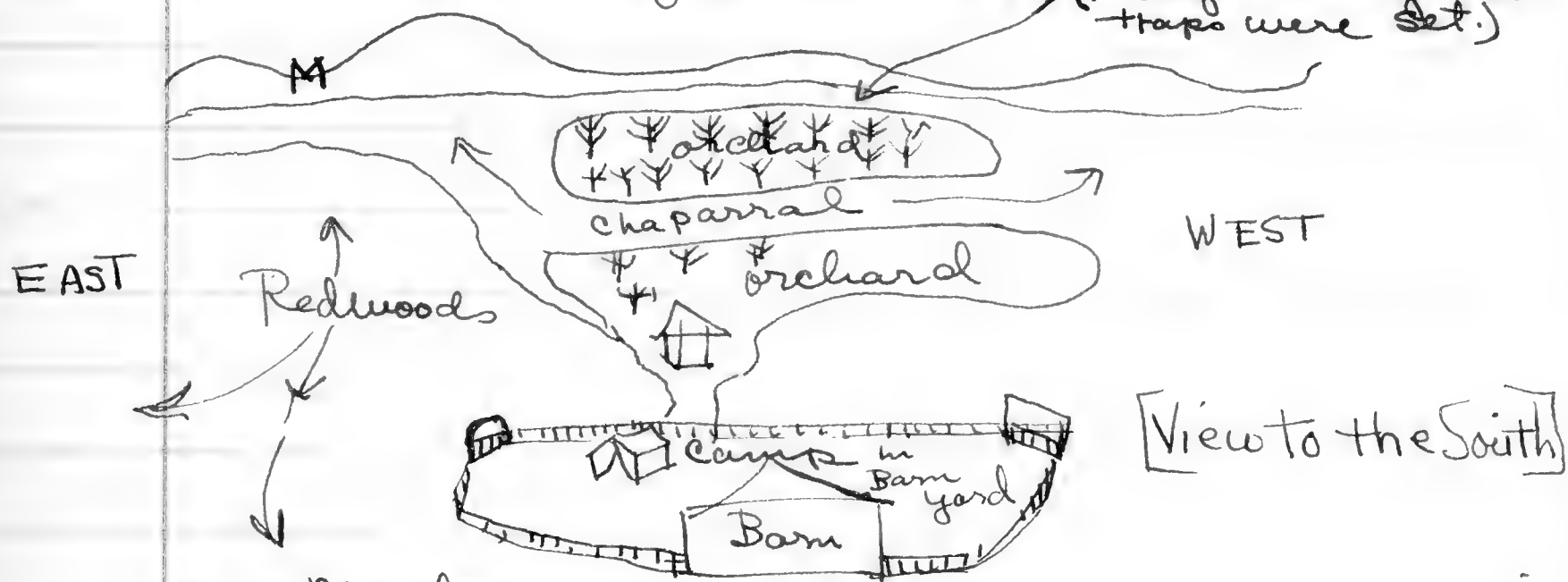
39.

Itinerary

April 1,

Bergland Ranch, ¹²⁵⁰ ² ^{NW} 1450 ft., 5 mi N. Corralitos,
Santa Cruz Co., Calif.

is mixed sand and ~~soil~~ ^{dirt} with a sugary
consistency. Here we caught 1 Dipodomys
and 1 Peromyscus Californicus. We next
set about 113 traps along the edge
of Chaparral near the top of the ridge
to the south of our camp. (margin along which
traps were set.)



M = Meadow

We spaced traps about 5 paces
apart. Here we caught 2 more Dipodomys,
1 ♀ Reithrodontomys, 3 more Peromyscus
Californicus, and 5 Peromyscus maniculatus.
The Chaparral is composed of Baccharis,
Poin Oak, Black berries, Strawberries,
Dear Clover and Old Apple Trees.

Next we set about 25 traps in a meadow
between two hills, placed in a little hollow.
Here we caught 1 ♀ Microtus ^{5 Emb.} and 1 Peromyscus
maniculatus. The meadow is grassy with
a few old Broken ferns. The soil up along

Memmler
1942

30

Itinerary

April 1, ¹²⁵⁰ ~~1450~~ ft., ² 5 mi. ^{NW} N. Corralitos,
Santa Cruz Co., Calif.

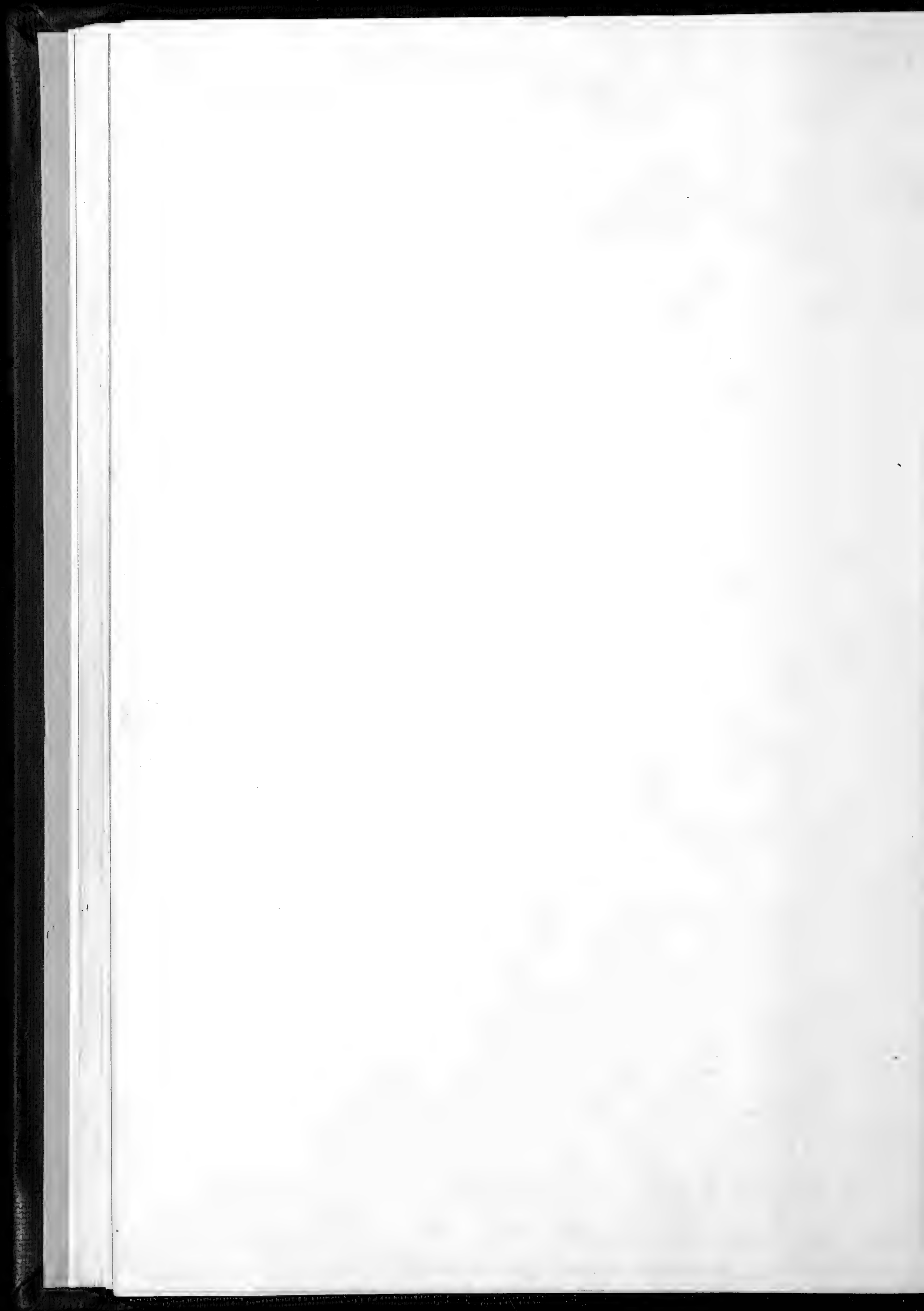
The ridge is rather sandy. The Chaparral ends rather abruptly and the upper slopes are grass covered with only occasionally Baccharis shrubs, these latter being small. All our traps were baited either with Walnut meats or peanut butter mixed with a little Oatmeal. There seemed to be no correlation between the bait and the catches made, as to preference between the two.

Out of 146 traps therefore we caught 3 Dipodomys (^{1♀} ~~2♂~~), 1 Microtus ♀, 1 Reithrodontomys ♀, ^{2♀} ~~4♂~~ Peromyscus californicus and 6 Peromyscus maniculatus 3♀ 3♂.

We also had 10 traps sprung. One trap had caught a Spotted Towhee.

We had rain yesterday afternoon and a foggy night last night. Today there was bright sunshine. There are large numbers of Coyote dropping along trails up on the ridge. Some of these were noted to contain parts of bones and teeth of rodents.

April 2, The day began clear but clouded over beginning about 9 A.M. The night was clear and not a great deal of dew was on the ground this morning, as compared to the heavy




V. Memmler
1942

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Itinerary

April 2, Berglund Ranch, ¹²⁵⁰ ~~1450~~ ft., ² 5 mi. ^{NW} N Corralitos,
Santa Cruz Co., Calif.

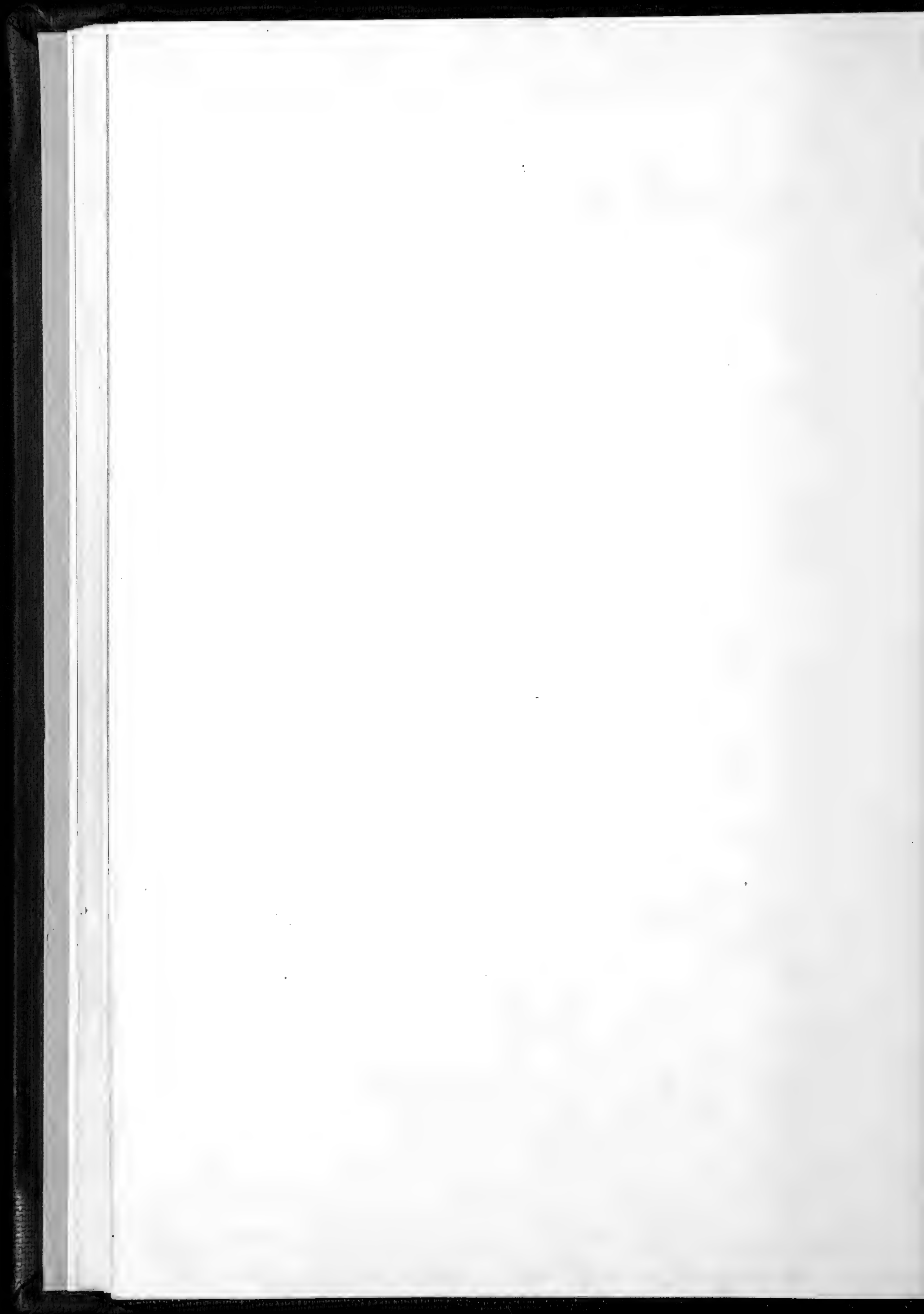
dew of the night before. We had set out Museum Special Traps in the late afternoon the days before. We left a great number of traps where they were the night before, but rebaited them ^{with walnut meats and peanut butter?}. 10 were across the strip of brush between apple orchards. Here we caught 1 Peromyscus californicus ♀. Along the edge of the brush near the ridge we set 96 traps. We caught 3 Dipodomys 2 ♂ 1 ♀, 1 Sorex (?), and 1 immature Sylvilagus ♂. There were 6 traps sprung. Traps were spaced about 5 paces apart. One of the Dipodomys had carried himself and trap about 20 ft. down a steep slope. The trap was set on a fairly level space and just above a wood rats house.



Trap set here
Wood rats house

3 ————— Dipodomys and trap found here

Yesterday of the three Dipodomys caught were all found ^{down hill} about 15 ft. from where traps were set. 2 of these were in traps and one out of a trap. This seems to show that the Museum Special traps are just a little small for Dipodomys.



Mammals
1942.

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Itinerary

April 2, ¹²⁵⁰ ² ^{NW} Berglund Ranch, 1450 ft., 5 mi. N Corralitos,
Santa Cruz Co., Calif.

None of our traps were wired, this also may account for the apparent inadequacy of the traps for catching Kangaroo Rats. We took 20 traps to a brush covered knoll near by last evening.

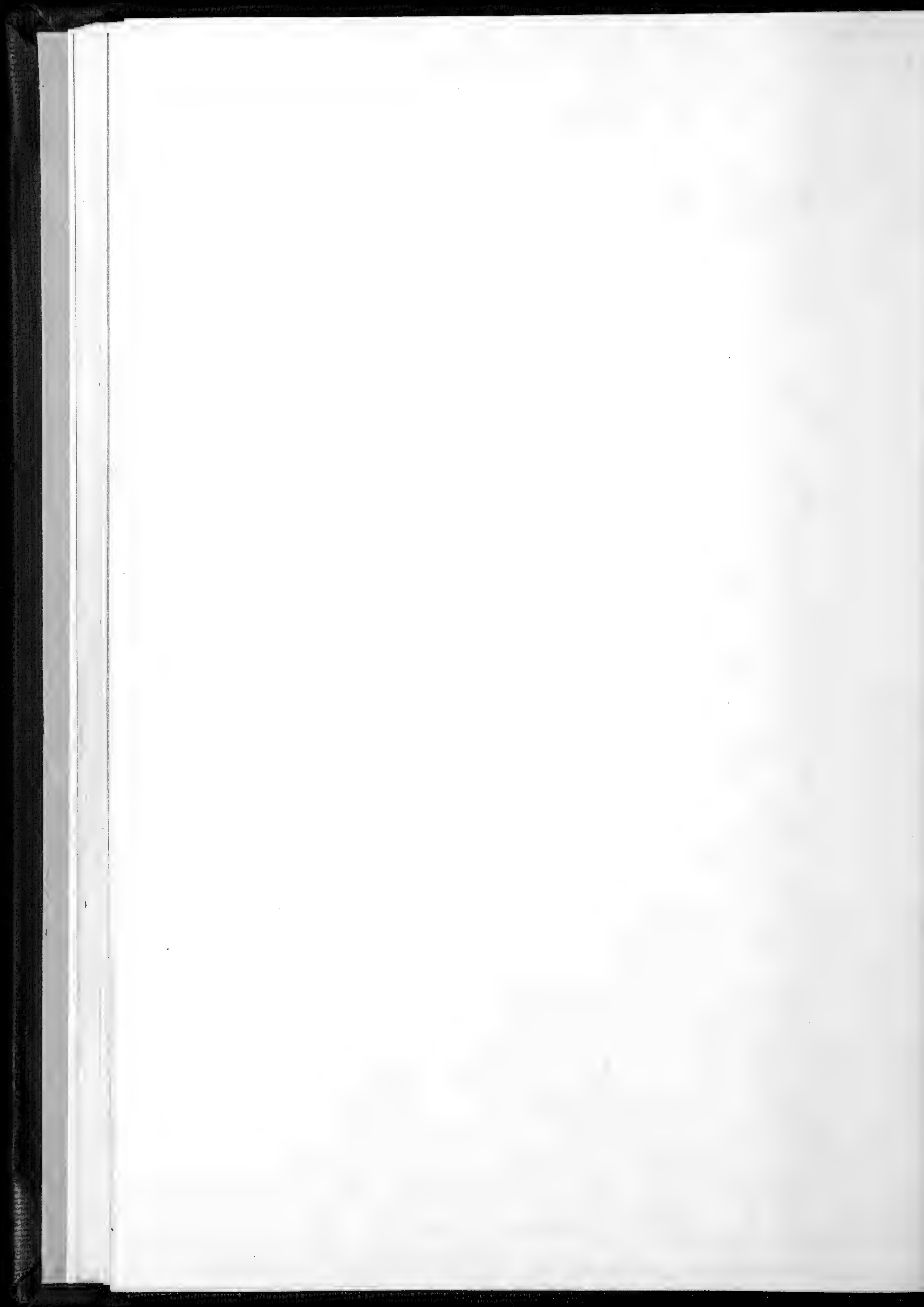
These spaced at about 7 paces caught 2 Dipodomys^{1 ♀} and 1 Peromyscus maniculatus.

The habitat here was much like the brush strip across the orchard and along the margins of the orchard. Large quantities of dry Lotus sp. covered the ground.

Baccharis and young planted Pinus Coulteri and Pinus radiata formed the tall brush. None of these were more than 7 ft. tall. Grass and Broken fern formed a rather complete cover over the Sandy Soil.

We caught 3 Wren-tits, 2 Spotted Towhees, and one Golden Crowned Sparrow in our first two locations. One trap was sprung on the knoll. On the way back to camp we gathered plants of the type found among cuttings in the Dipodomys cheek pouch of the day before. These included Filarie, Bur Clover, Red Maids and another yet to be identified.

At camp we saw a Pileolated warbler in a



J. Memmles
1942

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Itinerary

April 2,

Berglund Ranch, ¹²⁵⁰~~1450~~ ft., ²~~5~~ mi. ^{NW} N. Corralitos,
Santa Cruz Co., Calif.

Willow tree. We also saw a Turkey Vulture circle over the ridge. Yesterday Mrs. Grinnell caught 3 Sceloporus with nooses. These were on and under old lumber lying about the barn yard in which our camp is located. Today Mrs. Grinnell caught a Hyla. She saw a Thamnophis. Yesterday she set out traps for Wood rats in the Redwoods to the east of Camp, and a few traps for small mammals. She caught 1 Peromyscus Californicus, and one other Peromyscus, which we have not been able to determine yet. It is no. 86 in my Catalog. Mrs. Grinnell set out Gopher traps on farm land near Camp and today found 1 ♂ and 1 ♀ Thomomys ^{one with 6, 14 mm. emb.}. We, Jean and I caught 2 Microtus, ^{in day before} the same meadow where we set ~~last~~ yesterday. There were 6 other traps sprung here out of a set of 20 traps. This afternoon we saw a Chipmunk in the Redwoods near Camp. We decided to move camp, due to a falling barometer, so we packed up and left at 6:20 P.M. We took the same route as coming to the farm. First the small private dirt road, this goes west from the ranch for quite a way thru dense



memmles
1942

34.

Itinerary

April 2,

Berglund Ranch, ¹²⁵⁰~~1450~~ ft., ²~~5~~ mi. ^{NW} of Corralitos,
Santa Cruz Co., Calif.

Second Growth Redwoods. Next a private Road marked W. L. Rasmussen, which circles to the east and losses altitude rapidly. This then joins the Road to Loma Prieta. We however turned South on the Loma Prieta road to reach Corralitos. We reach this town in about half an hr. from the Berglund Ranch.

Birds Seen March 31 - April 2, 1942

1. Brown Towhee, many
2. Spotted Towhee, many
3. California Jay, Several
4. Steller Jay, Several
5. Wren-tit, many
6. Pileolated Warbler, few
7. California Purple Finch, many
8. California Quail, many
9. Bush-tit, Several
10. Thrasher, heard, few
11. California Woodpecker, heard, few
12. Great-horned Owl, heard, few
13. Song Sparrow, many
14. Owl, heard not identified, few
16. Junco, many
17. Western Robin, Several
18. Golden-Crowned Sparrow, Several



Itinerary

April 2, ^{1250 2 NW} Berglund Ranch, ^{1450 ft.} 5 mi. N Corralitos, Santa Cruz Co., Calif.

19. Green-backed Goldfinch, several

20. Red-shafted Flicker, few

21. Chickadee, several

22. Fox Sparrow, few

23. Turkey Vulture, few

24. White Crowned Sparrow, few heard

April 3, Mud Creek, 500 ft., 3½ mi. SW San Juan, Monterey Co., Calif.

This morning we drove to Salinas from Watsonville. After noon we went to see Mr. Silliman in Salinas. He showed us his Museum and we were particularly interested in the *Dipodomys* he had. From the tags Miss Boulware copied localities etc. for future reference. He then took us to our present camp after receiving permission from the tenant Mr. Henry Augustini. We took highway 101 out of Salinas, for 3 mi. to the north. Here we turned onto the road to San Juan. This is a good road. After 5 mi. we turned right onto the old San Juan road. We are Camped about 3 miles up this road. It began to rain in the evening.

April 4, Last evening we set out traps around the upper edge and part way down the hill next to our camp. We set out 134 traps. We found 24 Sprung this morning after a heavy



V. Merriner
1942

36.

Itinerary

- April 4, Mud Creek, 400 ft., $3\frac{1}{2}$ mi SW San Juan, Monterey Co., Calif.
Rain during the night. We also caught 1 Perognathus ♂, 1 ♀ nursing Microtus, 3 ♂ + 1 ♀ Peromyscus californicus, 1 ♀ nursing Peromyscus maniculatus and 4 immature Peromyscus. These traps were set in Artemesia about 4 feet tall. Live Oak, Poison Oak, grass and some Lotus sp. was also present. The heavy rain may account for the number of traps sprung. The soil is full of fine gravel. It is a loose soil. Mrs. Grinnell caught 2 Thomomys 1 ♀, 1 ♂ in 55 ft.
- April 5, Jean and I set out traps last evening when the rain seemed to be stopping for a while. Mr. Augustini told us he had at some time put out poison for birds across the road from his lettuce field along the brush by the fence. He said he found Dipos. among the animals poisoned by this method. We, hoping he really had set out 53 traps along this fence, placing them thru into the brush beyond. The ground outside the fence was recently plowed it appeared. The habitat here at the base of the hill inside the fence was wet dense ground cover under Live Oaks. Plants included in the ground cover are: Poison Oak, Braken fern, Artemesia californicus,



Itinerary

April 5, Mud Creek, 800 ft., 3½ mi. SW San Juan, Monterey Co., Calif.

Baccharis sp., blackberry, elderberry, snowberry, coffeeberry, and monkey flower. These plants were tall, up to about 10 ft. The soil was dark humus with some fine gravel. The slopes on the hillside above are dominated by Artemisia. The 53 traps along the fence and 34 others set inside the fence yielded: 18 Peromyscus californicus, 2 Peromyscus maniculatus, 1 Microtus californicus, 1 Sorex and one Eusattia. The Eusattia was a brilliant orange ventrally and a violet red-violet dorsally. 16 traps were sprung without catch. On the hillside 27 traps^{set} caught: 3 Peromyscus californicus, 1 Peromyscus maniculatus and 1 Sorex. 3 traps were sprung. The heavy, almost constant rain during the night may have set off some of our traps. In the traps along the fence three contained remains of Peromyscus showing predation. We used nuts for bait as before and Museum Special Traps. Large numbers of Woodrat houses were seen in the ground cover under the live oaks. We had only one rat trap with us when setting our traps and this did not yield anything. Mrs. Grinnell set a few traps along the fence near a meadow and caught on Peromyscus.



V. Memmler
1942

38

Itinerary

April 5, mud Creek, 800 ft., 3½ mi. SW San Juan, Monterey Co., Calif.
maniculatus. Rain continued steadily most of the morning until about 11:45 A.M. when there was a short let up. We quickly packed up and were just taking down the tent when Mr. Silliman arrived. He helped us lash the tent on the car and lead us to an Auto Cabin in Salinas. We have a very comfortable Cabin in the Anderson Salinas Motor Lodge for \$3.50 a night. At 4:00 P.M. we went to Mr. Silliman's house and he gave Mrs. Grinnell some facts on early history of the Cooper Club. He showed us his library full of Old, New, and Rare books on subject of Biological interest and Historical interest largely. He also has original drawings by Allan Brooks and Louis Agassiz ~~Forster~~ ^{Forster}.

April 6, muddy Creek junction with Chualar Canyon Canyon, ^{750 ft.} Monterey Co., Calif.
We arrived at Chualar Canyon from Salinas at about 11 A.M. We had to wait until 12:00 M before Mr. Silliman could see Mr. Gottlieb Johnson to get permission to camp on his property. While we were waiting I saw a Red-tailed hawk on the edge of its nest high up in a Sycamore tree near Chualar Creek. We set up camp at about 1:00 P.M. After



Memmler
1942

39.

Itinerary

April 6, Muddy Creek, 750 ft. Chualar Canyon, Monterey Co., Calif.
Lunch I went walking up the wood road which follows Muddy Creek. I saw several Raccoon tracks in the muddy places in the road, and some Cat tracks. A Bobcat crossed the road about 50 yds in front of me. The road runs S. until it reaches a level space where it turns E. It is about 1 mile from our Camp at the junction of Muddy Creek and Chualar Canyon. We saw a flock of about 25 Crows. There were also deer tracks seen in the road. The sky has been overcast since noon, but no rain has fallen yet. There were occasional strong wind. When the Crows were counted later at close range there were 15 in the flock.

April 7, Muddy Creek, 1,000 to 1,600 ft. 1 mi. S Chualar Canyon, Monterey Co., Calif.

Jean Boulware and I walked up the old wood road running along Muddy Creek towards the South. Here in the brush on the flat we set 31 traps. The habitat is composed largely of Salvia mellifera, Artemisia and Baccharis. In that order of abundance. We found 5 traps sprung with no catch, one Immature ♀ Woodrat, one Peromyscus maniculatus ♂, one toad,



O. Mearns
1942

90.

Itinerary

April 7, Muddy Creek, 1000 to 1600 ft., 1 mi. S. Chualar Canyon, Monterey Co., Calif.
and 2 ♂ Reithrodontomys. We next had set up the slopes of a steep hillside covered with Salvia mellifera where little ground cover was present. The ground showed evidence of being greatly washed during rainy weather. Here we found 2 traps sprung without catch and 2 Peromyscus of questionable species, both males. About a 100 ft. rise was covered by the fifteen traps set in this portion of the hillside. Farther up the mountainside the slope was not so great and ground cover under Black Sage, Baccharis, Artemisia and a few live oaks was more abundant. Large amount of Lolus sp. being present. Altitude here ranged from 1100 to 1400 ft. We set out 62 traps. 3 were sprung with no catch and others caught 1 ♀ and 1 ♂ Peromyscus californicus. The ♀ had 2, 8mm. embryos. Also caught here were 2 ♂ Peromyscus maniculatus and 1 ♀. The ♀ had no embryos. 2 ♂ and 1 ♀ Peromyscus of questionable species were also caught here. The ♀ had 2, 9mm. embryos. Thirteen traps set on the top of the mountain hill, caught 1 ♀ Microtus with 4, 14mm embryos. The top slopes of



Memmler
1942

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Itinerary

April 7,

Muddy Creek, 1000 to 1600 ft., 1 mi. S Chualar Canyon, Monterey Co., Calif.
The mountain have thinly spaced Artemesia grading into pure meadow on top. Elevation on top the hill was 1600 ft. From the upper slopes and top there is a fine view on a clear days. Toward the south thru a pass between two hills one can see the town of Gonzales. The slope set upon was all south facing. When we returned from setting these traps we did not follow the road, but crossed to another ridge which went in a NW direction. There are many large burned areas in the vicinity. In one of these we found the charred remains of a deer skeleton. The weather today has been cool and cloudy. Today another skeleton of a deer was found on the flat a mile from Chualar Canyon. There are deer prints and droppings everywhere. We saw one ♀ deer as we entered the flat this morning to get out traps. Numerous Coyote dropping have been seen and several cat prints. Mrs. Grinnell caught 4 gophers.

April 8,

Muddy Creek, 1000 ft., 1 mi. S Chualar Canyon, Monterey Co., Calif.
Last evening Jean Bouliware and I set out 127 traps along the road following Muddy Creek from the flat eastward. Plants are largely Salvia mellifera and Artemesia. There is some



Viola Memmles
1942

42

Itinerary

April 8, muddy Creek, 1000 ft., 1 mi S. Chulara Canyon, Monterey Co., Calif.

Baccharis and Rosa with short grass beneath. The Soil is full of sand and fine gravel as are the slopes on the hillside above on which we set yesterday. We found 9 traps sprung without catch, Bait removed from 4 traps and one tail, apparently Reithrodontomys. Catches as follows: 4 ♂, 3 ♀ Reithrodontomys, no embs., 2 ♂, 1 ♀ Peromyscus maniculatus, no embs., 1 ♀, 1 ♂ Peromyscus ? and 1 ♂ Perognathus. One Bewick Wren was also caught. We were out quite late setting traps, until after dark, but saw no Dipos. at play. Today we had fog until after 10:30 A.M. when it began to lift. There was bright sunshine until late afternoon when clouds again covered ~~the sky~~ Jean and I explored the wood road further and followed its course for about 4 miles. It goes higher up onto the tops of nearby hills. The plants seem much the same as where we had been setting. Chaparral, of the dry sort usually covers the S facing slopes, and live oaks the N facing, with grassy meadows between and on top the hills. We saw Lark Sparrows in the meadows on top the hills. I heard a Ruby Crowned



Itinerary

April 8, Muddy Creek, 1000 ft., 1 mi. S Cluellar Canyon, Monterey Co., Calif.
Kinglet and Linnet songs during our walk. The Crows mentioned before were seen again. Mrs. Grinnell caught 3 ^{Ensatina} ~~Salamanders~~ today all under the same log.

April 9, Last evening Jean Bouleware and I set out 127 traps along the wood road starting from the flat and going eastward. Salvia mellifera, Artemisia, Baccharis and Rosa are the main plants in the habitat in order of dominance. Short grass is growing under the bushes which are from 3 to 7 ft. tall. The Soil is fine gravel and sand. We set in runs as much as possible this time trying to get Microtus as we have given up hope of getting Dipodomys here. There are runs of very small diameter in great abundance and since we caught mostly Reithrodontomys today we believe that these are their runs. We caught 13 ♂ and 6 ♀ Reithros, no embryos; 2 ♀ and 1 ♂ Peromyscus maniculatus; 1 ♂ and 1 ♀ Microtus with 5 embryos. 18 mm. and one ♂ Sorex. There were 14 traps sprung without catch and the bait was gone from 4 unsprung traps. There were a few drops of rain during the night and a sudden shower this morning. There have been frequent showers this afternoon. Mrs. Grinnell, Jean and I went hunting Barn Owl Pellets this



Itinerary

April 9, muddy Creek, 750 ft., Chular Canyon, Monterey Co., Calif.
afternoon. We went to the Cut hay barn on the Johnson Bros. farm. The barn is divided into four compartments. Each one of these has a loft about $3\frac{1}{2}$ ft. wide and 12 ft. long. These are reached by ladders on the outside of the barn. Each of the four has a door from the outside next to the ladder. The doors have holes cut in them which look as though they were specially built to accomodate Barn owls. Three of the four platforms had a layer of cut hay about a ft. or more deep. In and on these were found pellets. There were eggs on 3 of the platforms. The first had 7 eggs, the second 8 eggs and the third 4 eggs. The egg were cream-white and about $1\frac{1}{2}$ " long. In the fourth barn we found no hay on the platform and a dead owl on the hay in the barn proper. In the second barn the owl flew in while we were there and perched in the corner of the barn next to the roof as long as we were there. We were directed to the Chopped-hay barn by one of the fine Johnson Bros. who own the Ranch, Mr. Gottlieb Johnson. He also told Mrs. Grinnell, that when

The first part of the paper discusses the importance of maintaining accurate records of all transactions. It is essential for the business to have a clear and concise record of all income and expenses. This will allow the business to track its financial performance over time and identify areas for improvement. The second part of the paper discusses the importance of maintaining accurate records of all assets and liabilities. This will allow the business to track its financial position over time and identify areas for improvement. The third part of the paper discusses the importance of maintaining accurate records of all debts and obligations. This will allow the business to track its financial obligations over time and identify areas for improvement. The fourth part of the paper discusses the importance of maintaining accurate records of all taxes and other legal obligations. This will allow the business to track its financial obligations over time and identify areas for improvement. The fifth part of the paper discusses the importance of maintaining accurate records of all other financial information. This will allow the business to track its financial performance over time and identify areas for improvement.

Itinerary

April 9,

Chualar Canyon, Monterey Co., Calif. 750 ft.

He first built his garage it was over run with Dipodomys on the ground floor. He had to put in a cement floor in order to get rid of them. He said also that they, the Kangaroo Rats are very fond of grain and gather wheat seeds.

April 10,

Chualar Canyon 800 ft., Monterey Co., Calif.

Jean Boulevard and I set out 120 Museum Special Traps last evening, along the margin of a young grain field. The wheat planting is sharply defined along the edge where it contacts the Artemisia covered hillsides of the surrounding valley wall. The Artemisia is about 3 or 4 ft. tall with short grass growing beneath it. We had 15 traps sprung with no catch. We caught 29 Reithrodontomys, 13♂, 7♀, 7 alive we let go and a ♂ and ♀ caught together in one trap. We also caught the following: 1♀ Peromyscus truei with no embryos, 7♂ and 8♀ Peromyscus maniculatus, 1 im. ♀ and 1 im. ♂ Microtus and 5♂ and 1♀, with no embryos, Perognathus. Three of the Perognathus showed evidence of predation in the head region. One had considerable cheek pouch content which is labeled 126 ♂ in my

Itinerary

April 10, Chualar Canyon, 800 ft., Monterey Co., Calif.
Catalog. The total catch was 53 animals
in 120 traps. This seems to me to be
a rather high catch in comparison to
other catches from the general locality.
After skinning this morning we packed
up about noon and started home. We
returned to Mr. Sellmans to collect animals
left with him from our first campsite.
He gave 6 specimens of Dipodomys
into our care for the Museum of
Vertebrate Zoology of California. We
returned to Berkeley via the San
Juan Road, San Jose, Centerville
and San Leandro. We stopped a
short while in San Juan to look at
the mission. We reached Berkeley
at about 6:30 P.M. and came to the
Museum to leave the bulk of
equipment from here.

April 6 to
10, 1942

Birds noted in Chualar Canyon Vicinity:

1. Western Red-tailed Hawk
2. California Jay
3. Wren-tit
4. Song Sparrow
5. Crow
6. Sparrow Hawk
7. Hairy Woodpecker



V. Memmler
1942

46.

Itinerary

April 6 to
April 10,

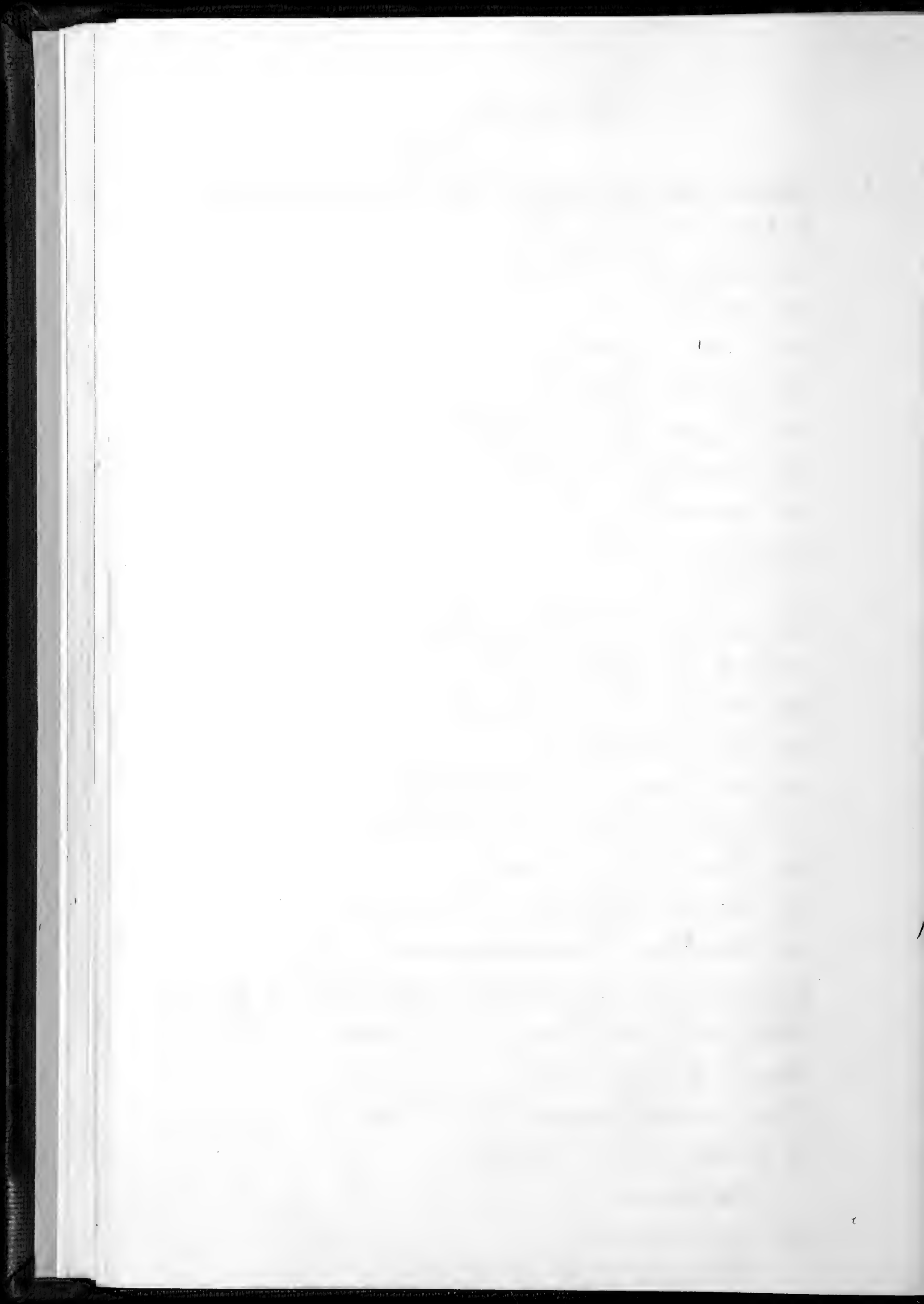
Chualar Canyon, 800 ft. ^{to 2,000 ft.} Monterey Co., Calif.

8. Hermit Thrush
9. California ^{Valley} Quail
10. Junco
11. Brown Towhee
12. Spotted Towhee
13. Vigors Bewick Wren
14. Turkey Vulture
15. Marsh Hawk
16. Barn Owl
17. Shrike
18. California Woodpecker
19. Red-shafted Flicker
20. White-throated Swift
21. Black Phoebe
22. White-crowned Sparrow
23. Golden-crowned Sparrow
24. Western Kingbird
25. Meadow Lark
26. Western Lark Sparrow.

Summary of material collected by Jean
Boulware, Hilda W. Grinnell and I from
April 1 to April 10, 1942

Mammal skins and skulls

<u>Thomomys</u> <u>kottae</u>	4
<u>Scapanus</u>	1
<u>Sylvilagus</u>	
<u>Microtus</u> <u>californicus</u>	8



Itinerary
Summary: April 1 to April 10, 1942 (cont.)

<u>Perognathus californicus</u>	5
<u>Dipodomys</u>	8
<u>Neotoma</u>	1
<u>Reithrodontomys</u>	21
<u>Sorex ornatus</u>	1
<u>Sorex townsendii</u>	3
<u>Peromyscus californicus</u>	8
<u>Peromyscus maniculatus</u>	10
<u>Peromyscus truei</u>	9 / 80 total

Skeleton only:
Thomomys bottae 1

Skulls only:
Scapanus 1

Canis lateralis 1

Birds 4

Embryos only:
Peromyscus californicus 7 sets

Amphibians
Batrachoseps attenuatus 6

Ensatina eschscholtzii 4

Triturus 1

Bufo boreas 1

Hyla regilla 1

Reptilia
Sceloporus 8



V. Mammulov
1942

p. 1.

Dipodomys

April 1, Berglund Ranch, 1450 ft., 5 mi. N. Corralitos,
Santa Cruz Co., California.

We set out 146 Museum Special traps.

8 of these were ~~in~~ across a strip of Chaparral, which has been left between two Apple plantings, parallel to the contour of the hillside to hold the soil. This has been found advantageous due to the soft sandy, almost sugary nature of the soil. This morning after a damp night with heavy dew we found 18 Dipodomys out of his trap about 15 ft. down the hill.

The habitat is dominated by Baccharis, about 7 ft. tall with Lotus sp., mostly dry covering the ground. Some Broken fern and Blackberries are also present.

About 113 traps were set farther up the hillside which is generally N. facing. These were along the same type of habitat as the strip, but on its edge where it seems to change rather abruptly to grassy meadow near the top of the ridge. There is a trail at this point which follows the break in habitats. Traps were placed along the trail on the Chaparral side at about 5 pace intervals.

Here we caught 2 more Dipodomys 1 ♂ and 1 ♀. Other traps were set in a meadow nearby.



V. Memmler
1942

P. 2

Dipodomys

April 1, Berglund Ranch, 1450 ft., 5 mi. N Corralitos,
Santa Cruz Co., Calif.

which lay between two hilltops. We got no
Dipos here. The ♀ Dipos. had no embryos.
Her pouches were filled with cuttings. These
included: Filaria, leaves and seeds, Redmaids,
stems, leaves and flowers, Lotus sp. leaves, Grass
flower heads, and also Burr Clover.

April 2, We set out 96 traps in the same marginal
habitat as the one mentioned for April 1.
Here we caught 3 Dipos, 1 ♀ and 2 ♂.
The ♀ had 2 embryos about 4 mm long.
We found both yesterday and today
that the Dipos tend to drag Museum
Special traps about 15 ft. down hill
from where trap is set. We believe the trap
is a bit small for this animal. Also
traps were not wired. We put 20 traps
on a knoll covered with large quantities
of Lotus sp., Saccharis, Pinus Coulteri and
Pinus radiata, both planted, formed the taller
growth, about 7 ft. tall. Traps were
spaced in both this location and the
other on both days at about 5 to 7 paces.
We used Peanut butter mixed with oats
and walnuts for bait, about half and half.
On the knoll we caught 2 Dipos. 1 ♂ and
1 ♀. The ♀ had also 2, 4 mm embryos.



V. Memmler
1942

Scapanus

March 31, Berglund Ranch, 1450 ft., 5 mi. N. Lorrainitos, Santa Cruz Co., Calif.

We walked down an old grown over road, thru second growth Redwoods, which connects the Berglund and Enos Ranches. There were large numbers of mole tunnels on the old road. One could hardly step anywhere without feeling the earth collapse beneath ones foot where workings were concentrated. As we walked along Mr. Hambecker, who was with Jean T. Boulware, Mrs. H. W. Grinnell and I, picked up two moles lying in opened tunnels on the ground. These were not together but in rather rapid succession. One of these had a cracked skull. Mr. Hambecker suggested the possibility of Coyotes having killed them much as dogs are known to do, by pouncing on the moving lump in the tunnel, thereby killing it, then digging it up and 'finding' it untasted. ~~FM~~

April 9, Muddy Creek, 750 ft., Chualar Canyon, Monterey Co., Calif.

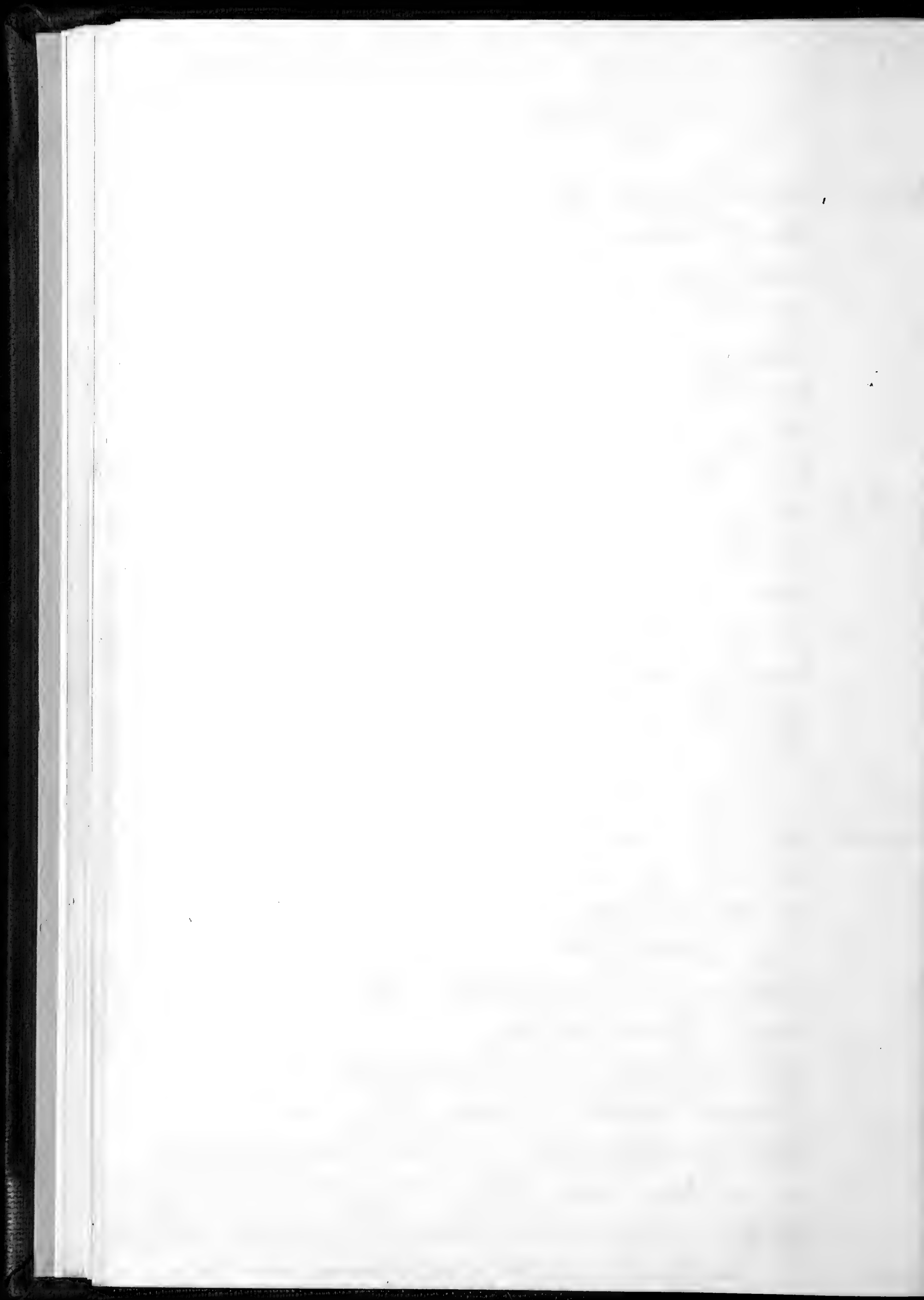
Two moles were found as loot in a cut hay barn beside a barn owl's nest. The heads were mutilated on both moles. The barn is on the main Johnson farm in Chualar Canyon.



V. Memmler
1942

Perognathus

- April 4, Mud Creek, 800 ft, $3\frac{1}{2}$ mi. SW San Juan, Santa Cruz Co., Calif.
One ♂ Perognathus was caught in one of 134 traps set around an Artemisia Californicus covered hill. Microtus Californicus, Peromyscus Californicus and Peromyscus maniculatus were also caught. There were 24 traps sprung during the night, probably partly due to a heavy rainfall. Nuts were used as bait.
- April 8, Muddy Creek, 1000 ft, 1 mi. S Chualar Canyon, Monterey Co., Calif.
One ♂ Perognathus was caught in one of 127 traps set in Dry Chaparral along a dirt road in a narrow V-shaped canyon. Salvia mellifera is the dominant plant with much Artemisia also present is Baccharis and Rosa. Short grass covers the ground except where sand drifts are piled.
- April 10, Chualar Canyon, 800 ft., Monterey Co., Calif.
5 ♂s and 1 ♀ with no embryos were caught in one of 120 traps set on the margin of a new wheat field where it meets the Artemisia covered slopes of the Canyon wall. Three had been mutilated, probably by a predator, in the head region. We were therefore unable to save them as specimens. These were the only mutilated specimens in the trap line which caught a total of 53 animals. Two of these mutilated were close together, but the third was at some distance away.



V. Memmler
1942

Microtus

April 1, Berglund Ranch, 1450 ft., 5 mi. N Corralitos, Santa Cruz Co., Calif.

One ♀ microtus with five embryos was caught in one of 25 traps set in a ^{grassy} meadow between two hilltop ridges. There were typical runways present in the grass. Nuts were used as bait.

April 2, Two ♀ microtus were caught in the same location as yesterday in one of 20 traps. One of these had 6, 4 m.m. embryos; the other had none. Nuts were used as bait.

April 4, Mud Creek, 800 ft., 3½ mi. SW San Juan, Monterey Co., Calif.

One ♀ nursing Microtus was caught in one of 134 traps set around the sides of a hillside covered with Artemisia californica. 24 traps were sprung, perhaps due to the heavy rain during the night. Also caught here were Peromyscus and Perognathus. Grass runs up above the hillside beneath the Artemisia which is about 4 ft. tall. Trails and holes on the slope are not very decided as are those found made by most Microtus. In fact we would not have anticipated their presence.

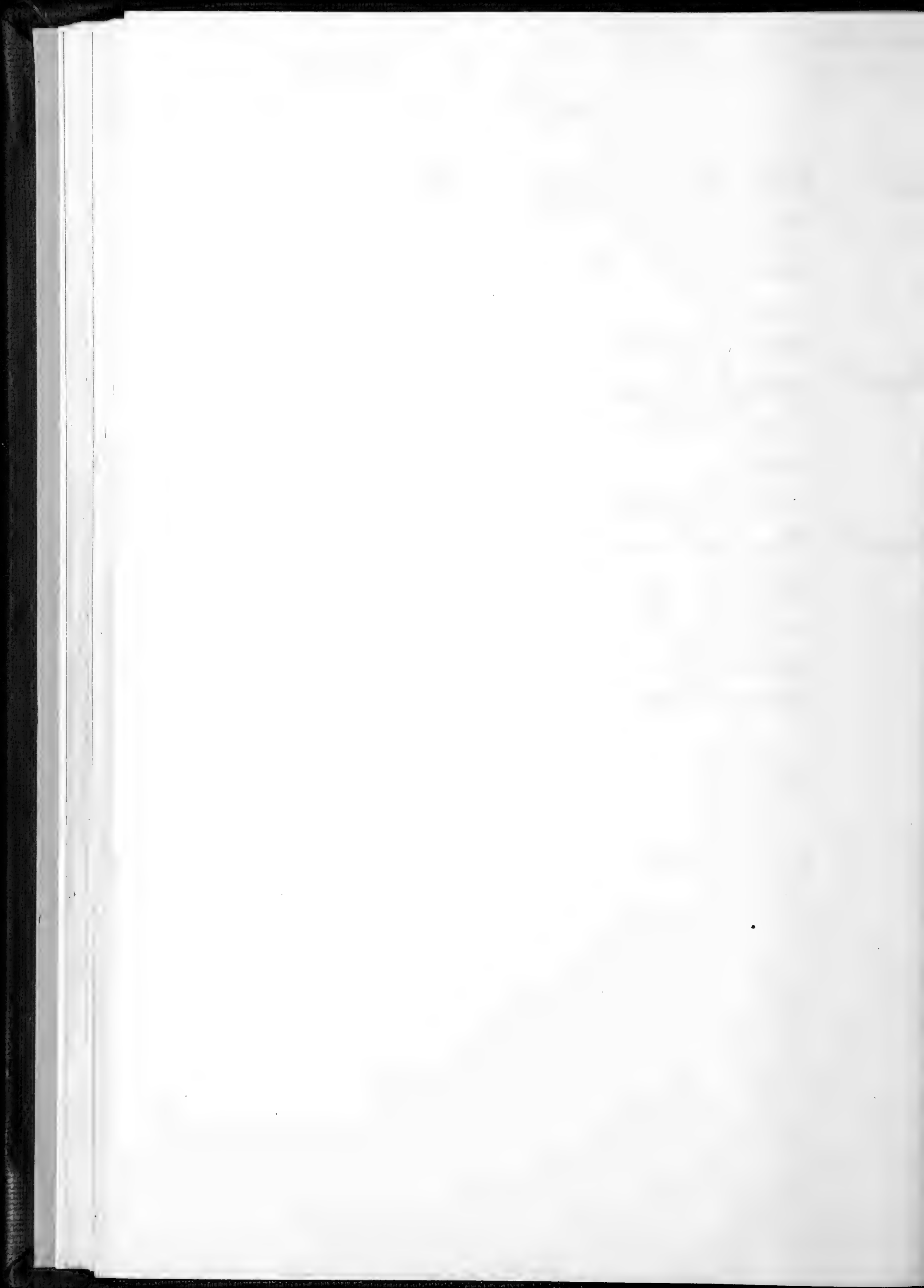
April 5, Jean set 17 traps in the same habitat as about, last night, and caught a microtus. In one of 87 traps set in dense ground cover under live oaks we got another Microtus. One of these was a ♀ with no emb. the other was a ♂.



V. Mermala
1942

Microtus

- April 7, Muddy Creek, 1600 ft., 1 mi. S Chualar Canyon, Monterey Co., Calif.
One ♀ Microtus with 4 14 mm. embryos was caught on top a hill where there was sparse Artemisia merging into open meadow.
- April 9, Muddy Creek, 1,000 ft., 1 mi. S Chualar Canyon, Monterey Co., Calif.
One ♂ and one ♀ Microtus were caught in runs in short grass under Black Sage and Artemisia. The ♀ had 5 embryos. 18 mm.
- April 10, Chualar Canyon, 800 ft. Monterey Co., Calif.
One immature ♀ and one immature ♂ were caught along the margin of a young wheat field where it met the Artemisia covered slopes of the surrounding Canyon.



V. Memmler
1942

Sorex

April 2, Berglund Ranch, 81450ft., 5 mi. N Corralitas, Santa Cruz Co., Calif.

One Sorex of questionable sex was caught in a trap line of 96 traps set along a margin of dry Chaparral quite open near the edges and consisting here largely of Baccharis.

April 5, Mud Creek, 800ft., 3½ mi. SW San Juan, Monterey Co. Calif.

Two Sorex, one a ♀, were caught in a live Oak habitat. One was at the base of a hill where ground cover was very dense and wet. The other farther up the slope where Chaparral was dominated by Artemisia.

April 9, Muddy Creek, 1000ft., 1 mi S Chualar Canyon, Monterey Co., Calif.

One ♂ Sorex, evidently breeding as testis were found to be outside abdominal cavity, was caught in a museum Special trap in short grass under Black Sage and Artemisia. Soil is gravelly and sandy.



V. Mearns
1942

Thomomys

April 2, Berglund Ranch, 1450 ft., 5 mi. N Corralitos, Santa Cruz Co., Calif.

Mrs. Grinnell set out several Gopher traps on some of the land near an old house.

She caught one large ♂ Gopher and one ♀.

April 4, Mud Creek, 800 ft., 3½ mi. SW San Juan, Monterey Co., Calif.

Mrs. Grinnell set out 5 traps in 5 separate sets and caught one ♀ Gopher and one ♂ Gopher.

April 7, Muddy Creek, 750 ft., Chular Canyon, Monterey Co., Calif.

Four Gophers were caught by Mrs. Grinnell.

Two were immature ♀'s, One was an adult ♀ and the other an adult ♂. These seem to have none of the usual Gopher parasites. They were caught in their burrows with steel Gopher traps.

Memmler
1942

Neotoma

March 31, Berglund Ranch, 1450 ft., 5 mi. N Carrizito, Santa Cruz Co., Calif.

While walking down the road thru second growth Redwood forest which goes between the Berglund and Cnos Ranches, we noticed several Woodrat houses on the ground in the ground cover.

April 2, Mrs. Grinnell set 4 traps in the Redwood for Woodrats but was unsuccessful.

April 5, Mud Creek, 800 ft., 3½ mi. SW San Juan, Monterey Co., Calif.

One trap set by Jean Boulware and I in ground cover under live oaks near a house was un sprung. We saw numerous houses house when we set out a line of mouse traps along the fence next to the road and this habitat. There was dense ground cover under the live oaks here. Plants included here are: Poison Oak, Bracken fern, Snowberry, Monkey flower, Artemesia, Baccharis, Blackberry, Elderberry, and Coffeeberry.

April 7, Muddy Creek, 1000 ft., 1 mi. S Chular Canyon, Monterey Canyon, Calif.

One immature ♀ was caught in a Museum special trap at the bottom of a hillside covered largely with Black Sage or Salvia mellifera and Artemesia. The Specimen is 10 ♀ in my Catalogue. We were very surprised to catch it as no Woodrat house have been seen here by any of us. We have been trying to locate them especially.



V. Memmler
1942

Sylvilagus

April 2, Berglund Ranch, 1450 ft. Santa Cruz Co. 5 mi. N
Corralitos, Calif.

One ♂ Immature Sylvilagus was caught in one of 96 traps set along the margin of dry Chaparral covering a hillside above an apple orchard. The traps were near the ridge of the hill where the habitat changed from Chaparral to Meadow. In setting out our traps we noticed many apparent rabbit runs with characteristic droppings. The margins of the Chaparral was dominated by tall Baccharis sp. bushes, about 7 ft. tall.



V. Memmler
1942

Reithrodontomys

April 1, Berglund Ranch, 1450 ft., 5 mi. N Corralitos, Santa Cruz Co., Calif.

One ♀ with no embryos was caught in one of 113 traps set along the edge of dry Chaparral which was quite open near the margins and here consisted largely of Baccharis. Nuts were used as bait.

April 7, Muddy Creek, 1000 ft. 1 mi S. Chualar Canyon, Monterey Co., Calif.

Two ♂ Reithrodontomys were caught in a flat area between two hills beneath a north facing slope. The dominant plants were Salvia mellifera and Artemisia with short grass ground cover. Soil is sandy and in a few drifts.

April 8, 4 ♂ and 3 ♀'s were caught in same habitat as above. None with embryos.

April 9, 13 ♂ and 6 ♀'s were caught in the same habitat as on April 7. None had embryos.

Many of them are caught by the tail and are alive when found. The Museum special traps seem to be a little large for these mice. There are numerous small runs in the grass and the Black Sage and Artemisia where Reithros. are abundant. We believe these are made by the Reithros. as almost every trap set in them caught a Reithro.

April 10, Johnson Ranch, 800 ft., Chualar Canyon, Monterey Co., Calif.

29 Reithrodontomys were caught in 28 out of

v. memminger
1942

Rethrodontomys

April 10, Johnson Ranch, 800 ft., Chualar Canyon, Monterey Co., Calif.
120 traps set in a margin between young wheat field and Artemisia covered hillside. The Artemisia was about 3 or 4 ft tall with short grass beneath. There were 13 ♂'s, 7 ♀ (no emb.), 7 caught alive and released and two, one ♂ and one ♀ caught together in the same trap.



V. Menninger
1942

Peromyscus

April 1, Berglund Ranch, 1450 ft., 5 mi. N Corralitos, Santa Cruz Co., Calif.
Six P. Californicus 3 ♀ and 3 ♂ and 4 smaller Peromyscus assumed to be maniculatus, 2 ♀ and 2 ♂ were caught in a trap line of 146 Museum Special Traps. One of these, P.C. was caught in a strip of Chaparral running thru the apple orchard. 3 P.C. and 3 P.m. were caught in traps (about 113 set) along edge of Chaparral above orchard where there is a change in habitat to meadowy top ridge. This is dry and open Chaparral on the edges where we set. One P.m. was caught in one of 25 traps set in a meadow for Microtus. The dry Chaparral is composed largely of Poison Oak, Blackberries, Strawberries, Lotus sp. and Old Apple trees.

April 2, One P.C. was caught in the same strip habitat as mentioned above, in one of 10 traps. One P.C. was caught on a knoll covered by dry Chaparral. We set 20 traps here. There were large quantities of Lotus sp., Baccharis sp. and Pinus (which had been planted.).

April 4, Mud Creek, 800 ft., 3½ mi. SW. San Juan, Santa Cruz Co., Cal.
3 ♂ and 1 ♀ Peromyscus californicus and 1 ♀ running Peromyscus maniculatus as well as 4 immature Peromyscus. 134 traps were set. 24

V. Memmles
1942

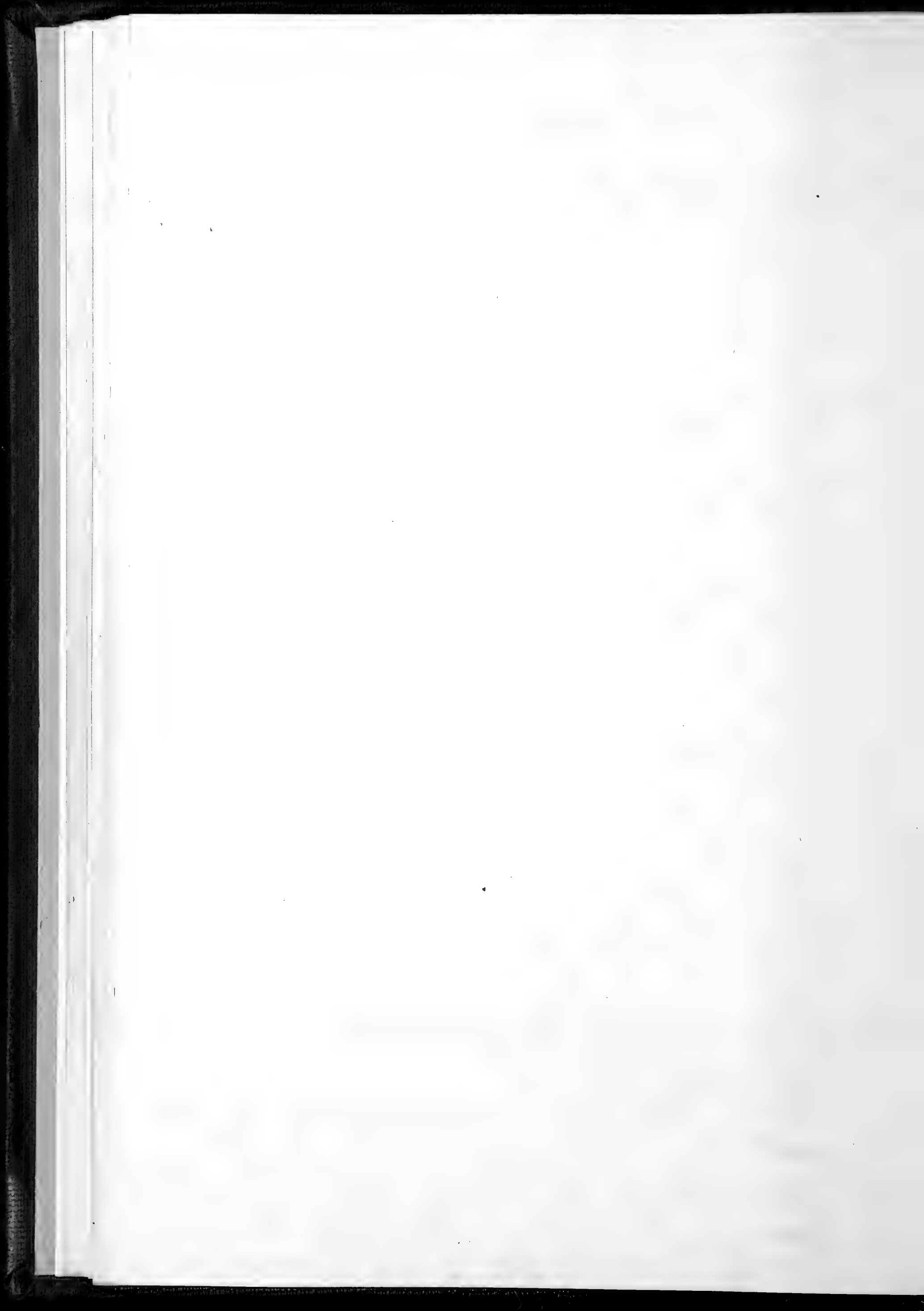
Peromyscus

April 4, mud Creek, 800 ft., 3½ mi. S.W. San Juan, Monterey Co., Calif.
traps were sprung, perhaps due to heavy rainfall during the night. Traps were set in Artemisia about 4 ft. tall on a hill side.

April 5, 87 Traps set in dense Ground Cover under Live Oaks caught 18 Peromyscus Calif-
ornicus and 2 P. maniculatus. 27 Traps high up on a hillside where Artemisia became dominant, in close chaparral, caught 3 P. Californicus and 1 P. maniculatus. A total of 19 traps were sprung. Of the P. maniculatus 5 were ♂ and 1 was ♀ with no embryos. Of the Peromyscus Californicus, 10 were ♂ and 11 were ♀. Of the ♀'s ~~one~~, 3 were without embryos. One was nursing of these two. The following are the number and sizes of the embryos in the ♀ pregnant ♀s.
3, 4 mm., 2, 26 mm., 3, 24 mm., 4, 12 mm., 2, 27 mm., 2, 15 mm., 3, 11 mm., 2, 10 mm.

April 7, Muddy Creek, 1000 to 1400 ft., 1 mi. S. Chular Canyon, Monterey Co., Calif.

One ♂ P. maniculatus caught in stand of Artemisia and Salvia mellifera at 1000 ft. on flat ground with Sandy Soil. 2 ♂ P. ? perhaps Truei or Boylei caught on steep slope about 1100 ft. One ♂ P. Californicus and 1 ♀ caught between



V. Mearns
1942

Peromyscus

- April 7, Muddy Creek, 1000 to 1400 ft. 1 mi S. Chualar Canyon, Monterey Co., Calif.
1100 and 1400 ft. also 2 ♂, 1 ♀ P. maniculatus and 2 ♂ + 1 ♀ P. ?. The ♀ P. c. had 2, 8 mm. embos. The ♀ P. m. had no embos. The ♀ P. ? had 2, 9 mm. embos. The slope was less steep here and with dense ground cover of Lotus sp. and ferns.
- April 8, Muddy Creek, 1000 ft., 1 mi S Chualar Canyon, Monterey Co., Calif.
2 ♂ and 1 ♀ P. maniculatus and 1 ♀, 1 ♂ P. ? were caught in one of 127 traps set along dirt road in flat 1 mi. S. of entrance of Muddy Creek into Chualar Canyon. Here Salvia mellifera and Artemisia are dominant with some Baccharis and Rosa. Short grass grows beneath these bushes.
- April 9, 2 ♀ and 1 ♂ P. maniculatus caught in same locality as above. ♀'s appeared a little immature in peltage.
- April 10, Johnson Ranch, 800 ft., Chualar Canyon, Monterey Co., Calif.
1 ♀ P. truei with no embryos and 7 ♂ and 8 ♀ P. maniculatus were caught in a margin between a young wheat field and the Artemisia covered hillside rising to form a canyon wall. Short grass was beneath the Artemisia.



V. Merriner
1942

Canis latrans

April 1, Berglund Ranch, 1450 ft., 5 mi. N Corralitos,
Santa Cruz Co., Calif.

Large numbers of Coyote droppings have been seen along trails and roads here.

They are particularly numerous on a trail following the margin of dry Chaparral near the top of a ridge. We saw evidence of Rodent and bird food in the droppings, these being teeth and feathers.

April 8, Muddy Creek, 1 mi. S Chualar Canyon, Monterey Co., Calif.

Skeleton was found by Jean Boulware and I. in dense Artemisia growth on a flat area at the base of a hillside covered by Black sage and Artemisia.



V. Mearns
1942

Buteo borealis calurus

April 6, Johnson Ranch, 800 ft., Chualar Canyon, Monterey Co., Calif.

11:00 A.M. A nest placed about $\frac{2}{3}$ of the way up a mature Sycamore tree was seen with a bird perched on the edge. The bird took off in flight and the outline and coloring identified it as a Red-tailed hawk. The nest was about 50 ft. above the ground. It was placed above a small fork in branches out from the trunk of the tree. The nest gave a rather haphazard appearance, with branches ^{and twigs} protruding in all directions.

Memmler, V.

1943

Miscellaneous - Catalog -
(

Memoranda for 7/24/53



V. Memminger
1942

Catalog

May 24, 1/4 mi SSE Bald Peak, 1800 ft., Contra Costa Co., Calif.

144

Eumeces

145

Eumeces

146

Eumeces

Oct 9

147 ♂

Myotis

10-30-9-13-10-7^{TR}

148 ♂

Lasiurus cinereus

127-38-12-17-10-9^{TR}

San Pablo Ridge, 1700 ft.

Nov. 26, 400 yds NNW Bald Peak, Contra Costa Co., Calif.

149

Eumeces

150

Eumeces

1943 (captures) April 11, Arroyo Mochos, 7 mi. SE Livermore, Alameda Co., Calif. (Killed April 14, 1943)

151 ♂

Antrozous pallidus

106-39-13-29-15^{TR}

Memmler, V

1943

Monterey and San Luis Obispo Co., Calif.





V. Merrimber
1943

Catalog

May 24, West side Arroyo Seco, 200ft., 4mi. S Soledad, Monterey Co., Calif.

152	♀	no emb.	Peromyscus	165-68-21-19	21.6 g
153	♀	no emb.	"	167-67-20-20	20.0 g
154	♂		"	158-67-20-18	19.2 g
155	♂		"	156-67-20-18	21.1 g
156	♂		"	165-72-21-20	22.5 g
157	♀	no emb.	Dipodomys	291-175-42-15	63.8 g
158	♀	no emb.	"	297-184-44-15	72.6 g
159	♀	no churning emb.	Reithrodontomys	151-77-17-15	13.8
160	♀	no emb.	Mus musculus	152-73-18-12	11.9 g

May 25, Gabilan Range, 1500ft., 5½ mi. ENE Soledad, Monterey Co., Calif.

skel. only	161	♀	3 emb. 13 mm.	Peromyscus truei	182-90-23-30	29.8 g
	162	♂		Reithrodontomys	131-67-17-15	6.8 g
	163	♂		Peromyscus maniculatus	152-67-20-20	20.7 g
	164	♂		Peromyscus truei	193-99-24-25	24.5 g
	165	♂		" "	188-98-23-25	24.7 g
	166			Uta		
	167			Sceloporus		
	168			"		

May 26,

	169	♀		Reithrodontomys	149-75-16-15	12.1 g
	170	♂		Peromyscus californicus	225-119-26-26	33.2 g
	171	♀	no emb.	" "	241-125-27-26	45.3 g
	172	♂		Reithrodontomys	146-78-17-17	10.6 g
	173	♀	no emb.	Perognathus californicus	183-104-23-11-10	14.7 g
	174	♀	no emb.	" "	197-114-26-13-10	21.0 g
	175	♀	6/6 mm. emb.	" "	201-112-26-13-10	23.0 g
	176	♂		" "	219-119-27-13-12	30.3 g



V. Mammiller
1943

Catalog

May 26, Gabilan Range, 1500 ft., 5 1/2 mi. ENE Soledad, Monterey Co., Calif.

177 ♂ *Perognathus californicus* 192-108-24-11-9^{n c} 18.1g

May 27,

178 ♂ *Reithrodontomys* 129-65-16-15 8.1g

179 ♀ 3/6 mm. emb. " 149-77-16-15 11.0g

180 ♂ " 128-67-17-15 7.8g

181 ♂ " 136-72-17-15 7.8g

182 ♂ " 146-74-17-16 10.4g

183 ♀ " 144-77-17-15 13.3g

184 ♂ *Perognathus californicus* 166-93-25-11-9^{n c} 12.3g

185 ♀ 5/7 mm. emb. " " 203-117-26-13-9^{n c} 22.2g

186 ♂ " " 215-118-27-(12)-(10)^{n c} 28.2g

187 ♂ *Microtus* 182-56-22-17 43.8g

188 ♂ " 179-58-23-17 51.5g

189 *Sceloporus*

May 28,

190 ♀ 5/8 mm. (emb.) *Perognathus californicus* 207-115-26-13-10^{n c} 24.9g

191 ♂ " " 212-120-26-14-11 25.8g

192 ♂ " " 178+83+-26-13-10 26.9g

193 ♀ 4/22 mm. (emb.) *Peromyscus truei* 205-103-25-26-22 39.0g

194 *Sceloporus*

195 "

196 "

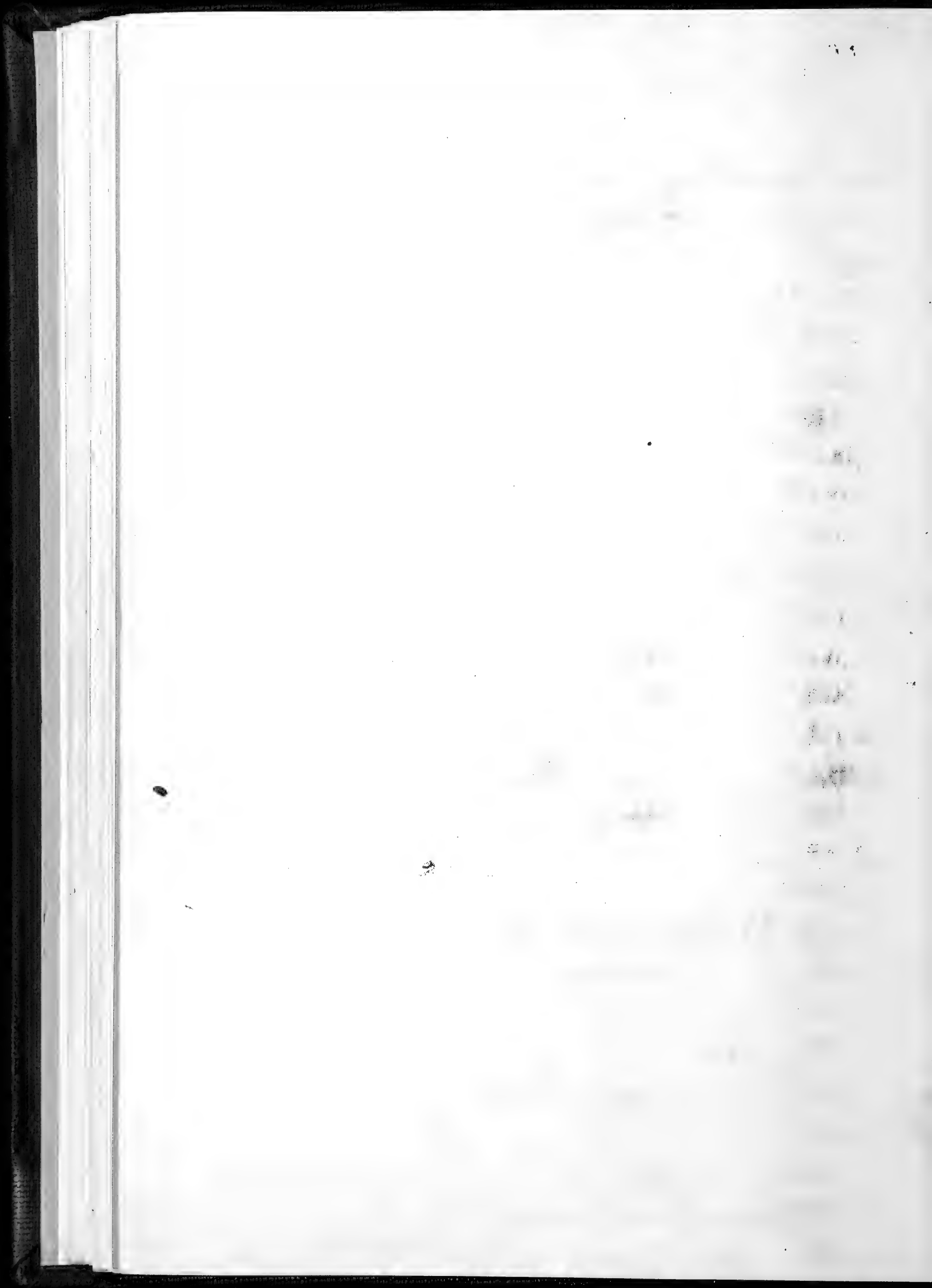
197 *Cnemidophorus*

May 29,

198 ♂ Shrew 99-37-12-7-4^{n c} 4.2g

199 ♂ immature *Perognathus californicus* 151-85-25-11-8^{n c} 12.8g

200 ♂ " " 203-104-26-12-10 26.1g



V. Mearns
1943

Catalog

May 29, Galilam Range, 1500 ft., 5½ mi. ENE Saldad, Monterey Co., Calif.

201	♂	<i>Perognathus californicus</i>	203-112-25-13-9 ^{n c}	23.1g
202	♂	"	" 131+40+25-13-10	22.8g
203	♂	"	" 206-112-26-12-9	25.0g
204	♂	<i>Microtus californicus</i>	163-50-23-17-13	51.5
205	♂	"	" 148-43-22-16-10	37.1

May 30,

206	♂	<i>Perognathus californicus</i>	160 (82A)-24-13-8	19.8g
207	♂	<i>Microtus californicus</i>	181-52-23-18-12	51.6g
208	♂ immature	<i>Dipodomys</i>	245-148-44-13-10	47.7g
209	♂	"	292-167-42-13-11 ^{n c}	71.9g
210	♀	"	309-185-43-16-12	77.2
211	♂	Col. by Charles Hall <i>Thomomys</i>	217-68-33-8 ⁿ	165g
212		<i>Sampsonia getulus</i> King Snake		

Specimen lost

May 31,

213	♂	<i>Myotis californicus</i>	80-36-6-13-8-8 ^{n c +}	3.8g
214	♂	<i>Perognathus californicus</i>	(194)-(99)-26-12-9	25.9g

May 29, (caught), Killed June 1, gave birth on May 31.

215	♀ (4 young)	<i>Peromyscus maniculatus</i>	166-75-20-18-13 ^{n c}	18.1g
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June 2, Indian Creek, 1500 ft., 13 mi. S Shandon, SLO Co., Calif.

216	♂	<i>Perognathus inornatus</i>	139-70-19-7-5 ^{n c}	12.6g
217	♂	<i>Peromyscus truei</i>	197-104-23-25-19	24.0g
218	♀ immature	<i>Dipodomys</i>	239-147-39-11-8	34.1g

Santiago Springs, 2700 ft., 8 mi. E + 1½ mi. S Simmer, ShO Co., Calif.

219		<i>Sceloporus</i>		
220		"		

June 3,

221	♂	<i>Reithrodontomys</i>	132-73-17-15-11 ^{n c}	8.4g
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V. Memmler
1943

Catalog

June 3, Santiago Springs, 2700ft., 8 mi. E and 1½ mi. S Simmler, Shasta Co., Calif.

222	♂	immature	<i>Perognathus californicus</i>	184-102-26-12-8 ⁿ -8 ^c	18.8g
223	♂	"	"	192-110-25-11-7	19.2g
224	♂	"	"	189-105-26-11-8	19.4g
225	♂		<i>Peromyscus maniculatus</i>	161-66-19-17-12	23.8g

June 4,

226	♂		<i>Reithrodontomys</i>	141-73-17-15-16 ⁿ -16 ^c	10.8g
227	♂		<i>Perognathus californicus</i>	206-115-26-11-9	25.8g
228	♂		<i>Peromyscus maniculatus</i>	155-62-20-17-12	20.0g
229			<i>Sceloporus</i>		

June 5,

230	♂		<i>Perognathus californicus</i>	185-111-23-12-8	19.4g
231	♂		"	207-112-26-13-9	25.7g
232	♂		"	204-107-26-14-9	28.0g
233	♂		"	203-112-26-11-7	24.2g
234	♀		"		
235	♀		<i>Citellus beecheyi</i>	387-152-50-23-17 ⁿ -17 ^c	501.0g
236			<i>Uta</i>		

June 6,

237	♂		<i>Perognathus californicus</i>	187-96-25-12-8 ⁿ -8 ^c	21.4g
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June 1, 2 mi. NNW Creston, San Luis Obispo Co., Calif.

238			<i>Lamprosetta getulus</i>		
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Itinerary

April 19, Bald Peak, 1850 ft., 1 mi. E Berkeley, Contra Costa Co., Calif.

Tom Rodgers, Walter Dalquist and I went out at about 7:00 A.M. to hunt Skinks. We drove to the Botanical Gardens in Strawberry Canyon and left Tom's car here. We then headed straight up the hill to Grizzly Peak. Walt picked up traps he had set the evening before along the way. We found several rocky outcrops on the east and south slopes of Bald Peak. Bald Peak is E of Grizzly and at the south-east corner of Tilden Regional Park. We collected 1 Rattle Snake and 1 Gopher Snake. Dalquist caught 20 Skinks, Rogers caught 14 Skinks and I caught 6 Skinks. We also caught several Sceloporus and saw many Triturus and some Anneides. We returned to the Botanical Gardens by 10:30 A.M.

May 3, East Side Bald Peak, 1800 ft., 1 mi. E Berkeley, Contra Costa Co., Calif.

Tom Rodgers, John Gray and I looked for skinks under rocks in this locality from about 8:00 to 9:30 A.M. We caught Cnemidophorus Sceloporus 2 Hyla and 1 Lampropeltus getulus. I caught 2 skinks, 4 Sceloporus and the 2 Hyla. We reached this location by driving to the Botanical Gardens in Strawberry Canyon and walking up the canyon and over the ridge.



Itinerary

May 3, Strawberry Canyon, $\frac{1}{2}$ E of U.C. Campus, Alameda Co., Calif.
Before going to Bald Peak, Mr. Rogers and I observed
bird from about 6:30 to 7:30 A.M. We heard
and saw several Black Headed Grosbeaks,
their song was almost unceasing. Also heard
were: Tolmie warbler, Pileolated Warbler,
Lutescent warbler, Bewick wren, House wren,
Western Flycatcher, Purple Finch, Chipping
Sparrow, Nuttall Sparrow, Valley Quail,
Pine Siskin, Song Sparrow, Green-backed
Gold finch and Oregon Junco. When we
reached Bald Peak we saw a Horned Lark
hovering, and both saw and heard
a Lazuli Bunting. Thrashers were
heard both in the Canyon and on the Peak.



J. Mammul
1943

50

Journal

May 24, West side Arroyo Seco, 200 ft., 4 mi. S Soledad, Monterey Co., Calif.

Yesterday Seth B. Benson and Emma Benson and myself drove from Berkeley to the above locality. We set out traps in the latter part of the afternoon. I set 50 Museum Special Traps and 50 live traps. The habitat at this locality is the marginal land between the dry sandy river wash and the heavily grazed farmland. Here are found many desert type plants such as: Yucca, Adenostema, Willow, Wild Buckwheat, Yarrow, Lotus, ^{Salvia melifera}, and Fitcher Sage. The soil is sandy for the most part. Patches of soil are left uncovered by vegetation. Where the soil is covered more or less completely a low grass is the dominant cover. The 50 live traps were set across an area having only lower bushes and not along the willow clumps. An effort was made to place them where the sandy soil was bare. Traps were placed about 40 ft. apart. The animal caught in these were: 1 Kangaroo Rat - Dipodomys (immature), 1 Mus musculus, 1 Reithrodontomys, and 1 Peromyscus (immature). The ~~50~~ Museum Specials were placed along willow clumps mainly and a few were placed on the bottom of the dry river bed near its edge. Out of 28 traps set along the willow clumps, 9 caught Peromyscus



V. Meemler
1943

51.

Journal

May 24, West Side Arroyo Seco, 200 ft., 4 mi. S Soledad, Monterey Co., Calif.
maniculatus, 2 caught Dipodomys and 7 traps
were sprung with no catch. Out of 8
traps placed on the dry wash bottom near
the edge, 2 caught Peromyscus maniculatus
and 4 were sprung. Out of 12 traps
placed across the area about the dry
bottom, one caught a Dipodomys and 4
were sprung. In all the total
catch in Museum Specials was
6 ♂ + 5 ♀ Peromyscus maniculatus, 2 ♀ + 1 imm.
Dipodomys. The weather both yesterday
and today was very windy in the afternoon.
After sundown the wind went away. Last
night there was a fog and a heavy dew.
In the morning it was warm and not much
wind blowing.

We stayed overnight on the Foster Ranch
operated and owned by Mr. Wood. He let us
skin our mammals in his barn out of the
wind. The night before we had gotten
all settled on the John Davis Ranch, but
due to a misunderstanding we were forced
to leave. We had our traps set out by then
so that we left them and returned this
morning to get them. The land we set on belongs
to the government, it is however very
hard to get thru the private property to the



Journal

May 24, West Side Arroyo Seco, 200 ft., 4 mi S Soledad, Monterey Co., Calif.
public land.

We saw many Crows in this locality. They seemed to have a roost in large trees on the opposite bank of the Arroyo Seco. A pair of lark sparrows were observed several times and appeared to be guarding a nest. A mourning dove was frightened from her nest. The nest was a shallow grass lined depression in between clump of buckwheat. There were two pale pink eggs in the nest. A Killdeer was seen in flight giving a call and perching and walking about on the sand. Blackbirds (Brewer) were common. Vultures and Red Tailed hawks were seen soaring. A Screech Woodpecker was seen. Meadow Larks, Shrikes and Kingbirds were also seen.

A Jack rabbit skeleton was found near a large Willow. A Cotton Tail was seen running. Brush rabbit sign was very abundant. The ground was honeycombed with burrows of mammals, and from the results of trapping I would assume them to be largely Dipodomys workings.

After a vain search for a place to stay near the Arroyo Seco we drove to Soledad this afternoon. There we bought a few groceries etc. We next drove up Stonewall Canyon to our



V. Memmler
1943

53.

Journal

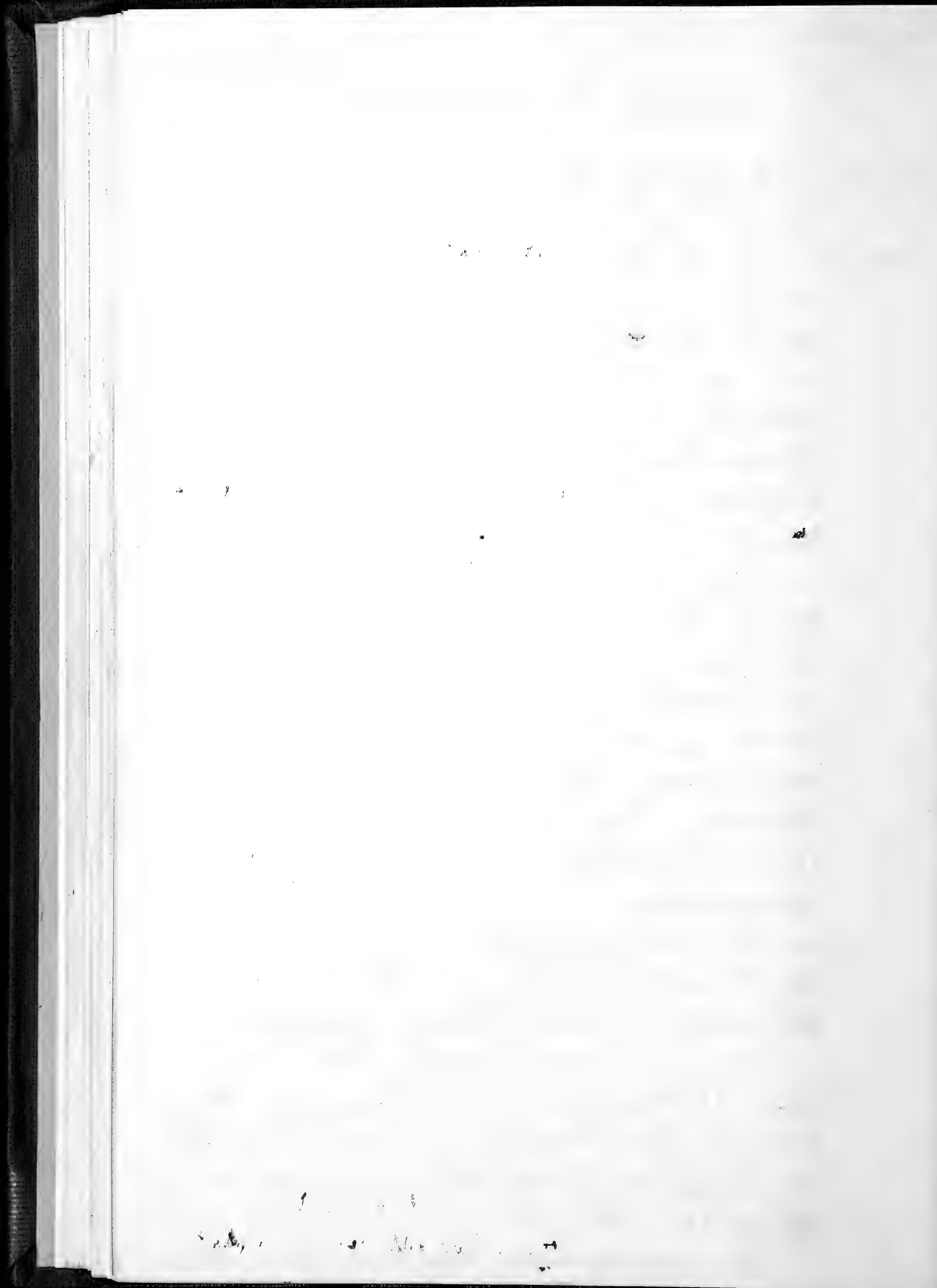
May 24, Gabilan Range, 1500 ft., $5\frac{1}{2}$ mi. ENE Soledad, Monterey Co., Calif.
present location.

May 25, We are staying in a small cabin on the Hall Ranch. The ranch has fields of barley and an almond grove. The land is shaped into rounded hills; where the land is not cultivated there are grassy slopes with stands of Adenostoma fasciculatum in the canyons. Canothus cuneatus is mixed in with the Adenostoma. There is a Blue-grey plant in great abundance ~~mixed~~ mixed with the grass. This plant is about 4 ft. tall. Last night I set 25 traps along the margin of the grass where it met the canyon bottom stand of Adenostoma. This morning 9 traps were sprung with no catch, 5 contained Peromyscus truei (3 ♀ + 2 ♂'s all but one ♀ immature), 1 ♂ Reithrodontomys and 2 ♂ Peromyscus maniculatus.

Last evening I caught a lizard just outside the cabin, I believe it is a Uta (see specimen #166). This afternoon I shot 2 Sceloporus.

This morning the following birds were observed: Titmouse, Wren-tit, Song Sparrow, Mourning Dove, Bewick Wren, Linnet, Thrasher, Cal. Jay, V. Quail, Turkey Vulture, Spotted Towhee, Horned Lark, Bush-tit.

The weather has been very warm today.



Journal

May 25, Gabilan Range, 1500 ft., $5\frac{1}{2}$ mi ENE Soledad, Monterey Co., Calif.

Last night was very pleasant and clear. This evening it is a little cool.

On a short walk Emma & I saw what we believed was a whip-tailed lizard. Later this afternoon I saw 2 skinks. One was in dry grass along a fence. The second was in green grass near the creek. They were both quite large and a brown yellow-green in color all over.

May 26, Last evening I set 25 Mus. Spec. traps in about the same places as the night before. This morning the traps contained 1 ♂ *Peromyscus maniculatus* (under *Adenostoma*), 1 ♂ *Peromyscus truei* (under *Leaenothus*), 2 ♂ *Peromyscus californicus* (1 under Willow & 1 under *Adenostoma*), 1 ♂ *Reithrodontomys* in grass near blue bush and 1 ♀ *Reithrodontomys* near creek under willows.

I also set 39 live traps. These caught 2 ♂ and 3 ♀ *Parognathus californicus*. (See species notes), 1 *Peromyscus maniculatus* (under *Adenostoma*), and 1 *Reithrodontomys* (under *Artemisia* & Blue bush.).

We spent most of the day preparing specimens. In the evening after setting our traps again we went up to the barn of the Hall Ranch. Mrs. Hall had told us that there were bats there which flew out over the water trough. We saw about 3 bats, but only for a few seconds each.



Journal

May 26, Galilean Range, 1500 ft., 5½ mi. ENE Soledad, Monterey Co., Calif.

so that we did not have time to shoot any.

It was foggy this morning until about 10:30.

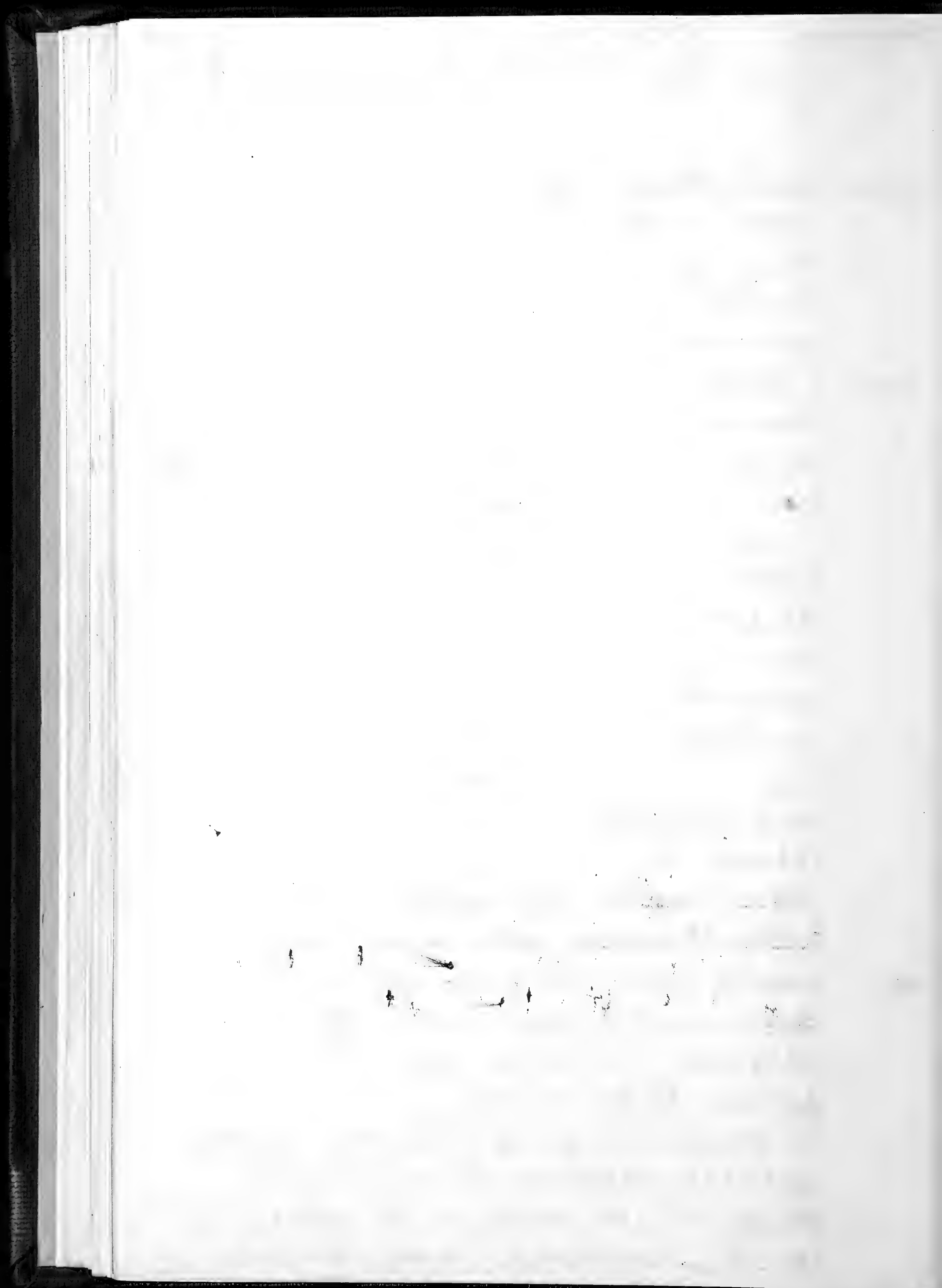
The rest of the day was clear, and the evening was cooler than the day before.

May 27, Last night I set out 50 live traps. This morning these had caught: 6 *Reithrodontomys* (2♂ 4♀), 2♂ + 1♀ *Perognathus*, and 2♂ *Microtus* and 1 *Peromyscus maniculatus*.

This morning after bringing back our traps we collected plants and tried to identify them. We decided to press all of them and take them home to verify their identification. This noon we picked peas, rhubarb and lettuce from Mrs. Hall's garden and brought milk from her. We also looked over her barn for evidence of bats, but found none. We caught 3 house mice in the barn and saw several others. I shot a *Sceloporus* on the way.

The afternoon we put up our mammals. This evening we set out live traps on the Hill that Seth Benson had trapped on the night before. While setting out traps we saw a large burrow, perhaps that of a Badger.

It was misting very heavily this morning, and it came down almost as rain. This cleared during the morning and the rest of the day has been clear and moderately warm.



Journal

May 28, Galilan Range, 1500 ft., $5\frac{1}{2}$ mi. ENE Soledad, Monterey Co., Calif.

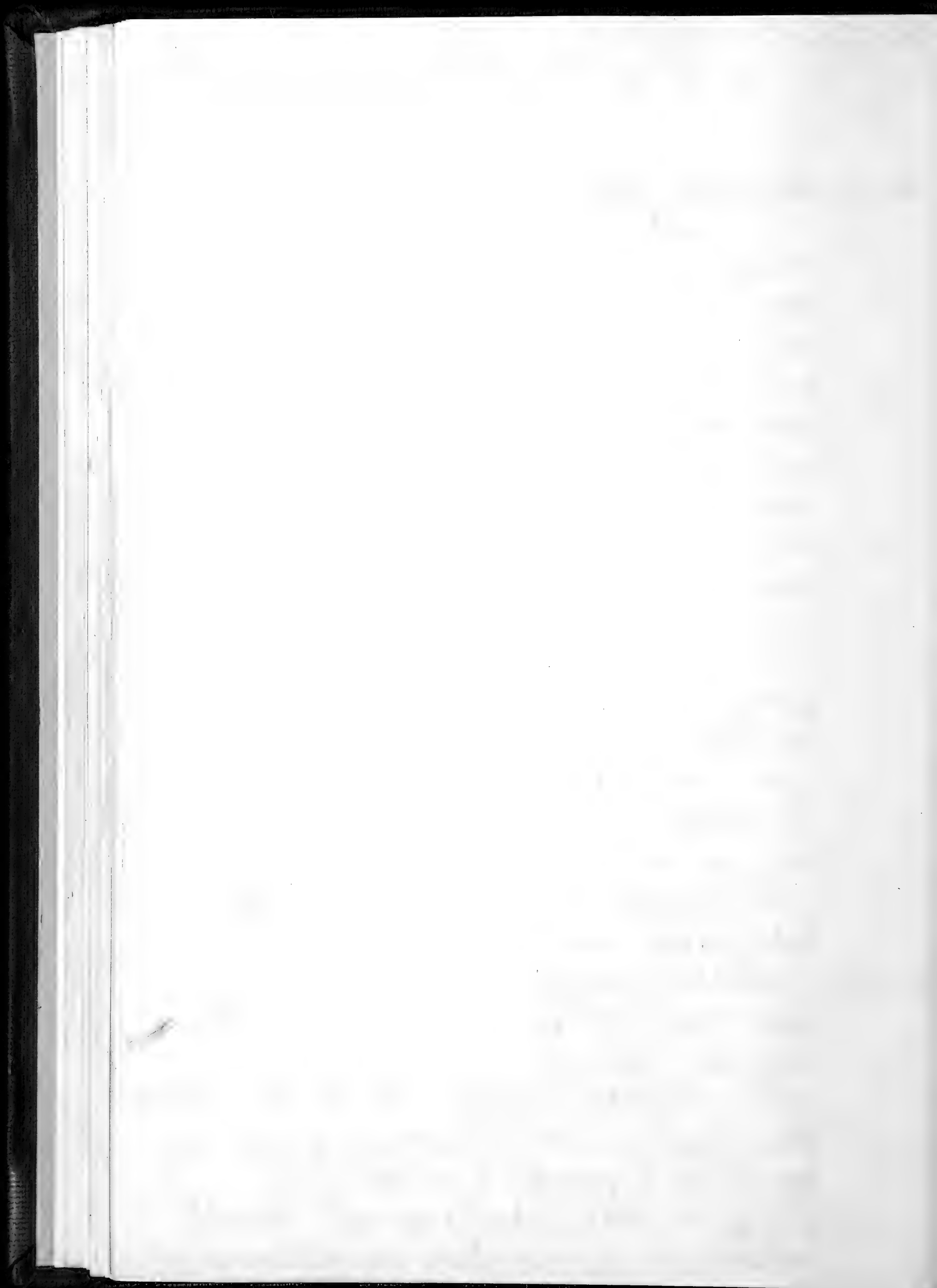
Last night I set out 50 live traps. These caught 3 *Perognathus* (2 ♂ + 1 ♀) and 1 ♀ *Peromyscus truei*. We came home and put up our specimens. Then I set 25 Mus. Spec. traps for *Microtus*. About noon Emma and I went up to the ranch house for milk. Along the road I shot 2 *Sceloporus* on rocks and one on a fence post. We walked to the next farm and saw the swampy place where cat tails had grown up. There were some *Microtus* runs in the grass where it was very wet. We went on and saw the house that Mrs. Hall's brother built out of adobe. After lunch we looked at our traps and found no catches yet. About 3:30 P.M. I saw a young whip tail which S. Benson shot. It was in a rock pile near our house.

Last Night it was quite cold during the night. Today it has been good weather.

May 29,

The traps set for *Microtus* the afternoon before were left out over night. In the morning they had a catch of: 2 ♂ *Microtus*, 1 ♂ shrew, 1 ♂ immature Pocket mouse and 1 ♂ *Reithrodontomys*. These traps were all set in runs in fairly tall grass, which appeared to be *Microtus* runs.

Fifty live traps set out over night caught:
10 *Peromyscus maniculatus*, 1 young *Peromyscus*



Journal

May 29, Gabilan Range, 1500 ft., 5½ mi. ENE of Soledad, Monterey Co., Calif.
californicus, 1 ♂ Dipodomys, and 4 Parognathus
californicus. These live traps were set in
and around Adenostoma mainly. Buckwheat
was also present in considerable quantity.
An attempt was made to place traps on
open ground that had workings. A group
of traps were set around a break in the
dense Adenostoma, these caught the pocket
mice mainly. (See species account for details).
It was cold during the night and when
we woke up there was a fog down in the
Salinas Valley. The weather was good
here during the day.

May 30, It was cold and clear this morning, windy
and clear in the late afternoon and clear
tonight. Last night I set out 50 Mus. Spec.
Traps and 50 live traps mixed around
a hill with natural habitat. There was
a lot of Adenostoma on one side and grass
and Blue bush on the other side. In the
live traps I caught only one ♀ Dipodomys.
In the snap traps I caught:
1 ♂ Microtus, 2 ♂ Parognathus, 2 ♂
Reithrodontomys 2 ♂ and 1 ♀ Peromyscus maniculatus
and 1 ♀ Dipodomys. In 24 traps
left out for Microtus I caught 1 Microtus
and 1 Reithrodontomys. This evening we

1844

Journal

May 30, Galilee Range, 1500 ft., 5½ mi ENE Soledad, Monterey Co., Calif.
went up to the barn to shoot bats. I shot 1 Myotis californicus. We saw only about 8-10 bats fly out of the barn. We watched the barn from about 8 to 9 o'clock.

May 31, Last night 50 live traps were set out along the edge and within a grassy hillside. There was Adenostoma along the margins and Blue bush thru the grass. These caught: 5 Reithrodontomys, 3 Peromyscus maniculatus, 1 Dipodomys (immature), one adult and one immature Perognathus californicus. We put up specimens during the morning. After lunch we left The Hall Ranch and went down Stonewall Canyon to Soledad. We stopped in Soledad and we drove 8.8 miles to Metz. We are camped now on the bank of the Salinas River at Metz.

June 1, Metz, 250 ft., Monterey Co., Calif.

Last night I set out 49 live traps along a bank near the Salinas river. The bank was about 2-5 ft high and was between the overflow flat of the river and a higher sandy terrace. Some Willows grew along the bank and Lotus, Star Thistle and grass were common above on the terrace. I caught 1 immature Dipodomys, 1 Reithrodontomys and two Peromyscus maniculatus. We left Metz about 11 A.M. and



Memmler
1943

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Journal

- June 1, Indian Creek, 1500 ft., 13 mi. S Shandon, SLO Co., Calif.
drove to King City where we had lunch.
After doing some shopping we drove on to
Pasa Robles where we did more shopping.
On the way to Pasa Robles we tried to locate
a locality where J. Dixon had caught
Perognathus inornatus near San Miguel.
We reached our present locality at Indian
Creek about 7 o'clock. We could not find the
owner of the land on which we wished to
trap. We were told by a neighboring
farmer that he lived in town, only coming
out once a week. We decided to camp
beside the road in a wide space and
set traps on the land to the north of the
road.
- June 2, I set out ⁴⁸~~50~~ live traps in a white sandy area
which I found by following a small road
through the fence on the north side of the
highway. The road lead to a cabin. I
did not go as far as the cabin to set my
traps. The plants which grew on the
sand were as follows, in order of abundance:
Lotus, Chorizanthe, Monardella lanceolata,
and Artemisia, ^{Astragalus and minimus.} There were other plant, which
I was not able to identify, because they
were not in bloom. I caught 1 Peromyscus
truei, 2 Peromyscus maniculatus (1 ♂ + 1 ♀),

Journal

June 2, Indian Creek, 1500 ft. 13 mi. S Shandon, ShO Co., Calif.
1 ♀ Dipodomys, and 1 ♂ Perognathus inornatus.
The weather was fairly warm during the night. After taking in our traps and breaking camp we drove on to Sumner. We reached our present camp about noon. We ate and then put up the specimens we had caught the night before.

June 3, Santiago Springs, 2700 ft. 8 mi. E + 1 1/2 mi. S Sumner, ShO Co., Calif.
We are camped under cottonwood trees a little north of the Spring on land under control of a Mr. Wimmer. We are in a canyon bounded by dry grass covered hills. There is a heavy growth of grass here this year due to abundant rain fall during the winter. I set out 48 live traps last night and 50 Snap traps. I caught one immature Perognathus californicus in the live traps. In the Snap traps I caught 4 ♂ Peromyscus maniculatus (1 adult 3 immature), 1 ♂ Reithrodontomys and 3 ♂ immature Perognathus californicus. The hillside I set on had a scattered growth of Juniperus, many plants of Stanleya pinnata, and a shrub and herb composites, also Buckwheat and grasses.

June 4, I left my traps where they were the night before. This time I caught 1 immature ♂ Perognathus



Journal

June 4, Santiago Springs, 2700ft., 8 mi. E + $\frac{1}{2}$ mi. S Sumner Slope
Californicus in my snap traps and 1 ♂ in my
live trap. Otherwise I caught the
following in my snap traps: 1 ♂ Reithro-
dontomys, 2 ♂ + 2 ♀ Peromyscus maniculatus.
I brought my traps in since my catch
seemed to be poor up on the hill. Last night
Emma had good luck setting along the
stream for pocket mice. So I set my traps
along the stream to night. This afternoon
we set out to dig up a pocket mouse
burro. The first trap set along the stream
, not more than about 25 yds. from camp,
had a hole near it. We could see a small
animal in the hole so we decided to take
it out. It was a young Perognathus
californicus with eyes still closed.
Seth dug up the burro and in all found
3 living and 3 dead young. We have
the young that are still alive in a box
and I am trying to feed them in the hopes
of keeping them alive.

June 5, Last night I set out 48 live traps along
the banks of the ^{dry} creek leading from Santiago
Springs down toward Carrizo Plains. The
water is piped from the spring now. Most of the
water from the creek goes into the pipe, but
there is some overflow for a few 100 ft down



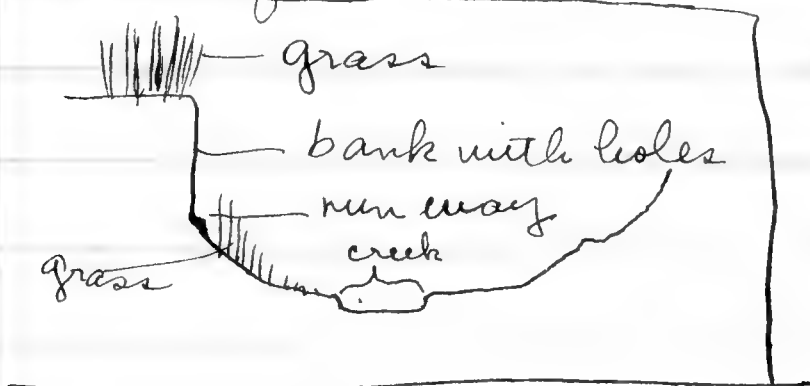
Summerville
1943

62

Journal

June 5,

Santiago Springs, 2700 ft., 8 mi. E and $1\frac{1}{2}$ mi. S Summerville, San Diego Co., Calif.
the gully. I caught 18 Perognathus Californicus (8 immature ♂'s, 5 immature ♀'s, 4 adult ♂'s and 1 adult ♀) and 2 Perognathus inornatus which we are keeping alive. The dry creek-bed runs north and south. The banks in many places are very steep. There are many holes in the bank and often runways at the bottom of the bank. There is dense grass



growing above the bank and sparser growth below down to the creek bed.

There are some
horshound plants and Heliotropium.

The small mice are still alive. I am feeding them at frequent intervals on Klin.

June 6,

Last night I set out 48 live traps in the same region as the night before. This time my catch was: 2 ♂ immature Peromyscus maniculatus, 1 adult ♂ of the same, 4 ♂ immature Perognathus Californicus, 2 ♀ immatures and 1 ♂ adult of the same. We put up the adult pocket mice and then took a few pictures and prepared to break camp.

Yesterday afternoon when resetting my traps Emma went along. On the way back we walked along the road. We saw a squirrel



Memmiller
1943

Journal

June 6, Santiago Springs, 2700 ft., 8 mi. E + 1 1/2 S Summerville, SLO Co., Calif.
sitting in front of her hole higher up in the road cut. We were carrying pistol. Emma's was a 38, and mine a 22. Both were loaded with shot. We decided that in order to kill the squirrel we would both need to fire. So we fired our guns at once and killed the Citellus. We missed the skull but hit her so as to cause lung and intestinal hemorrhages. She died almost instantly. I shot a Uta while setting my traps also.

We left camp about 1 o'clock today for home. We returned home by going to McKittrick and then on highway number 33 to Tracy, number 50 to Dublin, number 20 to Walnut Creek and from there to Berkeley. We stopped in McKittrick for a meal and again in Coalinga for refreshments and in Los Banos for Supper. At each stop I fed the baby pocket mice some Khin. We reached Berkeley at about 11:20 P.M.





V. Memmler
1942

Killdeer, Oxyechus vociferus vociferus

May 2, Inspiration Point, Tilden Regional Park, Contra Costa Co., Calif.

Two Birds were seen in flight coming toward the point from the north-east. In flight their long pointed wings and two-striped breast let me know they were Killdeer.

They alighted, one after the other, in the center of the circular plot about which the road on the point runs. Here they began a steady single noted conversation. The note was very sharp and high. The note was repeated in rapid succession by each of the birds.

At first they seemed to alternate speaking. A raising and lowering of the head accompanied the sounding of the note. Both birds appeared to be foraging at first for a short time. Then one of them squatted down on the ground and began to rock, head to tail, still accompanied by the sounding of the note. The head was ducked into the neck and the tail was raised, all in one coordinated motion. This bird, apparently a female, seemed to be laying an egg. The rocking kept up for about 15 min. and then she seemed to become quieter. The male, in the meantime, had been foraging, or at least picking up material from the ground with a jerking movement of the head. He twice came toward the female and put his head under her breast as if curious to see the fruits of her labor. He never went more than 10 yards from the female during the time she was squatting. The female did not remain oriented to the substrate in the same direction during the 15 min. she was laying, but several times moved about seemingly to find a more comfortable arrangement. Toward the end of the 15 min. she several times stood up from the ground and poked about with her bill where she had been sitting.

Once she had stopped making the noise and seemed quiet I walked toward her slowly. She ran away a safe distance, 12 yards or so, from the nest in one direction and the male did the same in the opposite direction. I had some difficulty locating the nesting spot even when I kept my eyes focused ahead from where I had been observing. The ground was covered with small red-brown soft textured irregularly shaped rocks. Only occasional short grass about 3 or 4 inches tall grew here.

When I finally saw the eggs they were in the center of a small depression among the small rocks. There were three eggs about $1\frac{1}{2}$ inches long. X They blended beautifully into the the color of the rocky ground. I did not touch the eggs but retreated to our car which was only about 15 yards from the eggs and from where I had been observing. The female came back at once to the nest.

The male soon followed her. He had been crouching down Looking much like a rock as we inspected the nest.

All three were point downward toward the center of the nest
X they had a dull grey - green background with black blotches and spots on the large end



V. Memmler
1942

2.

Killdeer, Oxyechus vociferus vociferus

May 16, Inspiration Point, Lilden Regional Park, Contra Costa Co., Calif.

7:45 PM The nest observed on May 2 was relocated by me today. As I approached the sitting bird darted off and away from the nest and began flopping about as if wings and tail were injured. The nest was very difficult to see as before. There were 4 eggs this time with the small ends to the center. The bird returned to the nest at once after I left it undisturbed.

May 30, The sitting bird left the nest as before 2:00 PM. When we approached, starting to flop and flutter. But when we approached the nest still closer she returned to within 2 yds of us and gave loud ear-rending single noted crys until we retreated.

14-00000

V. Memmler
1943

Dipodomys heermanni

May 24, West Side Arroyo Seco, 200 ft., 4 mi. S Soledad, Monterey Co., Calif.

Four specimens were caught in traps set in the marginal land along the arroyo Seco. Two were immature 2 were ♀ adults. Many holes were seen all over the vicinity.

Galician Range, 1500 ft., 5 1/2 mi. ENE Soledad, Monterey Co., Calif.

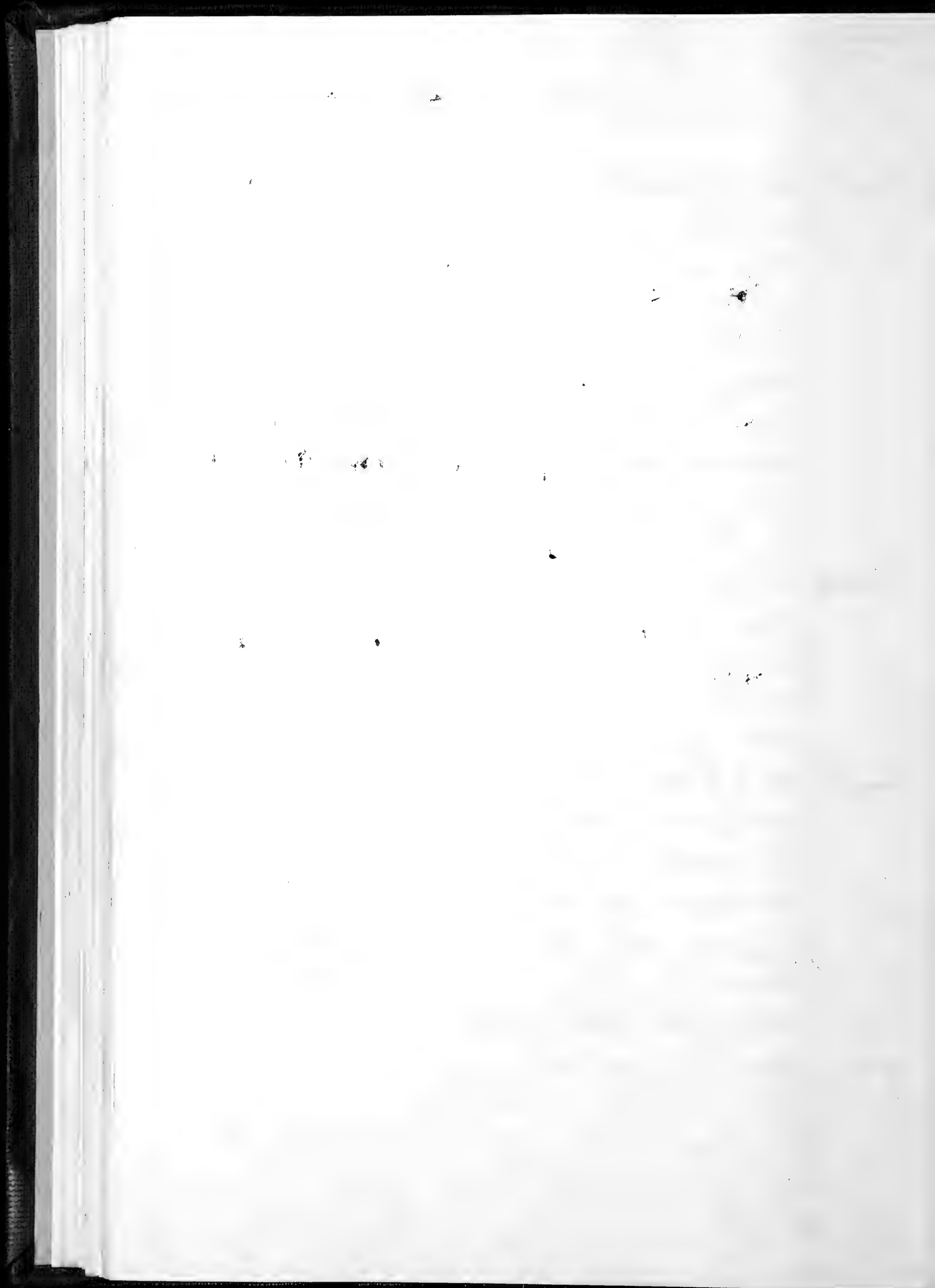
Dipos said to live here by Mrs. Hall, owner of Ranch. Tracks seen very commonly. One live one seen on small road after dark tonight about 9:45 P.M.

May 29, One ♂ Dipos. was caught in a live trap set near Adenostoma and buckwheat in well worked loose soil with many holes nearby. The trap was about a yd. from where it had been set when picked up this morning.

May 30, One ♀ Dipos. was caught in a live trap on open loose ground, well worked with many holes and mound, near Adenostoma. The trap was again about a yd. from where it had been set. This ♀ had ears 3 mm larger than the ♂ caught yesterday. It may be D. elephantinus.

June 1, metz, 250 ft. Monterey Co., Calif.

One immature heermanni was caught in a live trap set near a hole on a terris bank of the Salinas river. Willow, Star Thistle and Lotus are the dominant plants near by.



V. Mearns
1943

Dipodomys heermanni

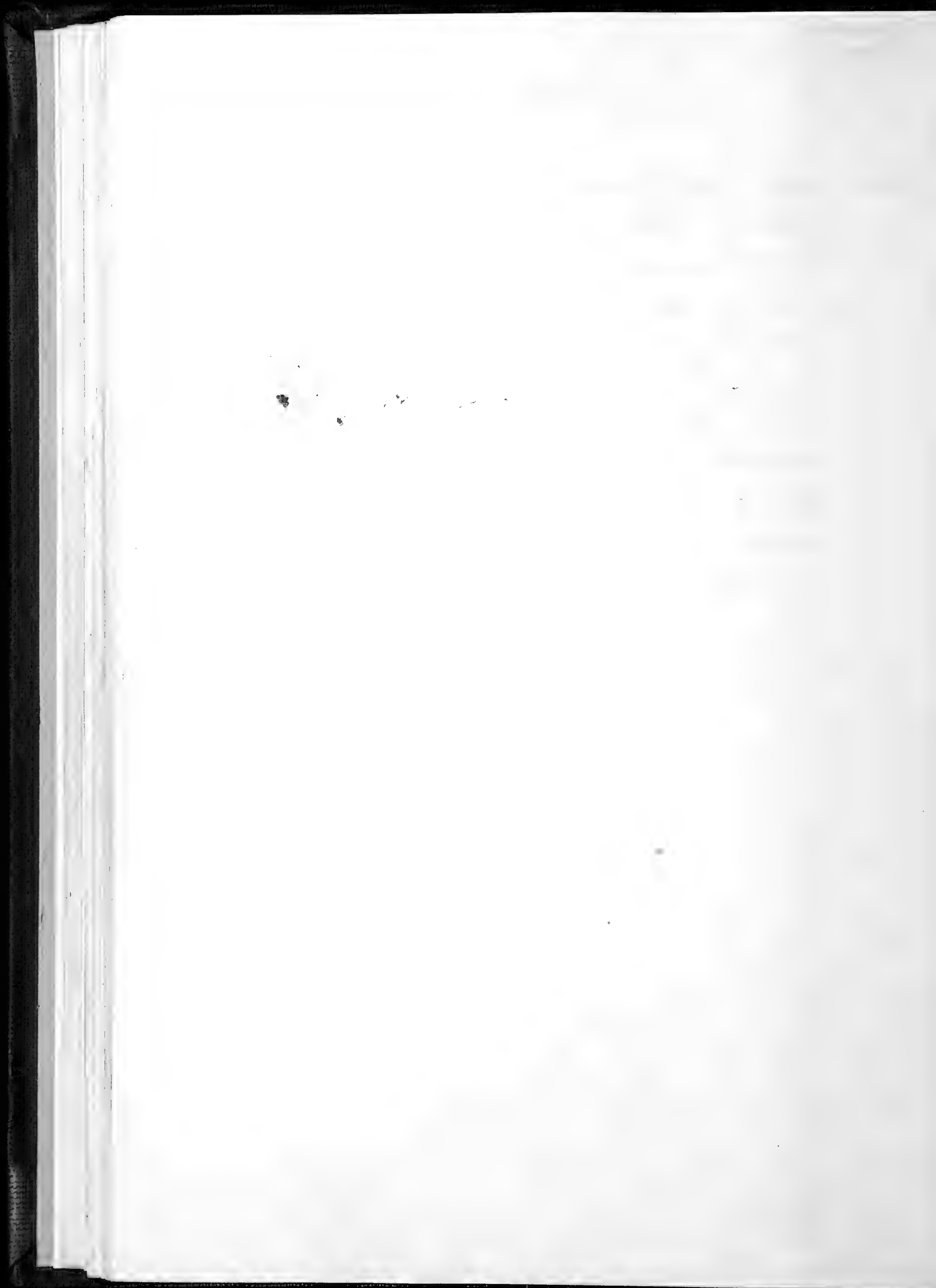
June 2, Indian Creek, 1500ft., 13mi. S Shandon, ShO Co., Calif.
One immature ♀ was caught in a live trap set on white sandy soil. Sotus, Chorizanthe, Monardella, Artemesia and minimus were abundant. Many tracks and holes were seen in the vicinity.



J. Memmles
1943

Citellus beecheyi

June 5, Santiago Springs, 2700 ft., 8 mi. E $H\frac{1}{2}$ mi. S Simmler, Sh Co.
Calif.
When walking along the road south
of our camp, Emma Benson and I
saw a squirrel sitting in front of her
hole higher on the road cut. We were
armed with a 22 shot pistol and a
38 pistol. We fired on her simultaneously
and killed her instantly. The road cut
being so high (about as wide as the
road itself) I had to go quite a distance
to find a place to ^{get up to} retrieve the animal.



V. Mearns
1943

Microtus californicus

May 27, Galillean Range, 1500 ft., 5½ mi. ENE Soledad, Monterey Co., Calif.

Two ♂'s were caught in live traps on a grassy hillside. One was caught under *Adenostoma* in grass, the other in a runway in the grass. There are many runways present in the grass; I have set in runs before, but this was my first success at this locality.

May 29, Two ♂'s were caught in runs in dry grass about 1½ to 2 ft. tall. Snap traps were used. These were left out during the day before, but with no catch. These two were caught during the night.

May 30, One ♂ was caught near a hole, but on a open area of ground and not in a run. This was near Lotus.

W. Merriam
1943

Mus musculus

May 24, West Side Arroyo Seco, 200 ft., 4 mi. S Soledad, Monterey Co., Calif.

One specimen caught in live trap. Paleness in color noticed by Dr. Benson as being a lighter color than that found on the coast.

O. Memmler
1943

Perognathus californicus

May 26, Gabilan Range, 1500 ft., 5½ mi. ENE Soledad, Monterey Co., Calif.

Three ♀s and 2 ♂s were caught in 5 out of 39 live traps set across and along the edge of of grassy hillside with *Adenostoma* along the edges and ~~a~~ Blue bushes scattered thru the middle in the grass. Three were caught on mounds in the grass near the Blue bush. One immature was caught on a mound near the Blue Bush and *Artemisia*. One was caught along the margin where the old grass + *Artemisia* meet the new barley field. One ♀ #175 had 6, 6 mm embryos.

May 27, Out of 50 traps set in similar habitat as the night before 3 caught Pocket mice. Two ♀ adult #185 had 5, 7 mm embryos. One was a small adult, the other an immature male. These were caught on mounds in the grass near *Adenostoma*. The best place to set for these mice seems to be where holes and open soil is present, where the grass is absent for one or two feet across and where the soil looks recently disturbed by digging. There are often holes that appear to be plugged as well as open holes near successful sets.

May 28, Out of 50 live traps set over a brushy hill side, 3 caught Pocket mice, 1 ♀ and 2 ♂s. Two were caught near wild Buck Wheat, the other was under lotus near Blue bush. One was caught near a lair of some large animal, perhaps a Badger.



V. Memmler
1943

Perognathus californicus

May 28, Galilee Range, 1500 ft., 5½ mi. ENE Soledad, Monterey Co., Calif.
The ♀ had 5, 8 mm embryos.

May 29, Four specimens were caught in the following places in live traps: one in dense *Adenostoma* on bare ground with no working present, 2 near holes at the edge of a small break in the *Adenostoma*, and one at the edge of the same break near freshly worked ground, but with no hole present. The break had the texture of a small meadow. It was about 75 yds long and 10 yds wide. Grass was growing in the middle as well as a Bur like thistle and Yellow *Bloomeria*. This meadow afforded good food for small mammals and the soil was bare around the edges of it for 3 or 4 yds, before the *Adenostoma* became dominant. This area contained many holes and working. It was in this area that the 3 live traps which caught pocket mice were set. The one pocket mouse caught in dense *Adenostoma* was caught within about 6 or 8 yds of the break.

May 30, One immature ♂ was caught in a snap trap set in a microtus run on a grassy hill side with many blue bushes and *Adenostoma*. One adult ♂ was caught on a worked mound under the *Adenostoma* surrounded



W. Menniger
1943

Perognathus californicus

May 30, Galician Range, 1500ft., 5½ mi. ENE. Soledad, Monterey Co., Calif.
by grass.

June 3, Santiago Springs 2700ft., 8 mi. E + 1½ mi. S. Sumner, SLO Co., Calif.
3 ♂ immatures were caught in ~~live~~ Snap traps.
And one immature was caught in a live trap.
The traps were set on a hill side where junipers
and Stanleya were the dominant plants.
Buckwheat, Baccharis and two ^{other} Compositae
were also present. Small holes were present
near three of the sets. The soil is loose,
but only occasionally are there bare spots
not covered by grass.

June 4, One ♂ immature was caught high on
the hill set on yesterday. The trap
was placed under a juniper in an open
run. An adult ♂ was caught in a live
trap near the bottom of the hill slope,
almost at the canyon bottom between
the hill I was setting on and the next
hill. The mouse was dead. The trap
was set in the shade of a lush composite.

During the afternoon we dug out a
Pocket mouse burrow near our camp. It is
situated in the bank of a dry stream bed.
It is surrounded by grass on the surface near
the hole and all about the vicinity except for
a small area where worked ground was
apparently thrown out of the tunnel system.



W. Mummer
1943

Perognathus Californicus

June 4, Santiago Springs, 2700 ft., 8 mi. E + $\frac{1}{2}$ mi. S Guinnlev, S. H. Co., Calif.

A dense growth of horchond is $2\frac{1}{2}$ yds. away from the mouth of the burrow in the bottom of the creek bed. The soil is very heavily packed for 3 or 4 inches on top, but is easily worked beneath. There are many small rocks in the soil. The hole opening to the outside is 22 by 30 mm across. The drop down from the hole to the next level is 80 mm. One small mouse was found in the hole opening to the outside.

(That is on the level just beneath the hole.)

A Second infant came walking out from one of the tunnels as it was excavated, about 6" from the Exit hole. A third was found 3 ft from the exit, as was the fourth one. There were ants on two of the young and a tick on one. Two more mice were found. There were 6 in all. Three were alive and three dead. A Camel Cricket was in one of the tunnels. One nest (of chewed grass stems) was in a spherical cavity 10 cm in diameter. The bottom of this cavity was 50 cm. from the ground surface.

June 5,

The small mice found in the burrow yesterday were weighed today and they ranged from 4 to 7 grams. The two who survived the night both weighed 7 grams. They were fed about

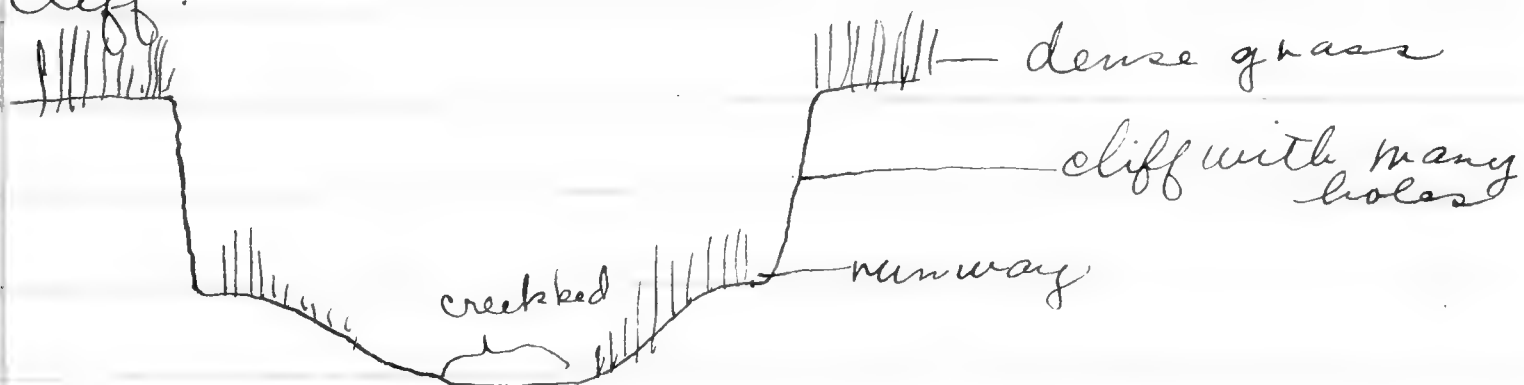


V. Memmler
1943

Perognathus californicus

June 5, Santiago Springs, 2700 ft., 8 mi. E + 1 1/2 mi. S Simmler, Shoshone Co., Calif.
every two hours on warm skin. They seem to be very easily chilled. I kept them with me during the night to keep them warm.

In 48 live traps set along the banks of the creek going south from Santiago Springs I caught 18 Perognathus californicus (8 imm. ♂'s, 5 imm. ♀'s, 4 adult ♂'s + 1 adult ♀.) I also caught 2 Perognathus inornatus. No other genera were caught at all. The banks of the stream are quite steep in some places. They are full of holes of various sizes and there are frequently runways at the bottom of the cliff.



The creek is dry for most of the way, but just below the spring there is some water (more or less stagnant) in the bed. The immature ♀'s caught weighed: 15.6, 16.9, 16.9, 17.5 and 19.0. The last had 6 very small embryos. She had a total length of 182 and a tail of 102.

June 6, In 47 live traps set in the same region as last night caught 4 ♂ immature P.c., 2 immature ♀ P.c. and 1 adult ♂ P.c.



V. Mammals
1943

Perognathus californicus

June 6, Santiago Springs, 2100 ft., 8 mi. E + 1½ mi. S Sumner, S.D. Co., Calif.

neither of the ♀'s had embryos. There were Peromyscus maniculatus caught this time also.

The adult ♀ caught yesterday was kept alive because she had milk. The young were put with her in the hope that she would adopt them and let them feed. She however seemed to ignore them completely. The infants survived the night and also the journey home today. I carried them in a small ^{cardboard} box $4\frac{1}{2} \times 3\frac{1}{2} \times 1\frac{1}{2}$ with a wrapping cotton ^{lining} and perforations in the lid. We stopped to feed them milk about every two hours along the way. I feed them again at midnight when we got home. I keep them in the same small box at night in my bed. One mouse had one eye open today.

June 7, M.V.Z., Berkeley, Alameda Co., Calif.

The young P.C.'s were fed milk, ^(Klin) twice at home at 7 and 9 a.m. and then taken to M.V.Z. They ate klin again at 11 and 12.

At 1 o'clock they were not very much interested in milk. They wandered about the large box I had them in and kept gnashing their teeth. Tom Rogers went out and got some green wild Oats and



J. Memmler
1943

Perognathus californicus

June 7, Mus. Vert. Zool., Berkeley, Alameda Co., Calif.

we removed the green juicy seeds and gave them to the mice. They picked them up from the bottom of the box and ate them with great relish. One or two grains were even stored in the cheek pouches by one of the mice. I then went to Brock's Bird Store on Shattuck Avenue and bought some dry, ^{mixed} field seeds @ 10¢ a pound. When I gave the mice some of these they also ate them. They cracked the outer shell with the teeth. They may have stored some of these in their pouches also. Later I saw them clearing out their pouches. They pull them all the way out with ^{hard} stroking motion against the lower jaw from posterior to anterior using one hand on each side of the jaw. When I took them home last night I used the same small box with a small bottle of hot water to help keep them warm. At home they ate more seeds* and drank a little milk. They were with

June 8, me again last night in bed. This morning they drank a little milk and ate a few seeds. Yesterday both eyes of one were open. The others eyes are still

* See June 14
for method



N. Memmiller
1943

Perognathus californicus

June 8, Mus. Vert. Zool., Berkeley, Alameda Co., Calif.

closed. They are now sleeping in the end of the box near the radiator. One is lying stretched out on his side and back. They are often observed sleeping on their backs.

Pat (one missing a claw) was first measured, and its hind foot is 19 mm. and its tail is 55 mm. Mike has one eye which just opened about 11 o'clock. I fed them quite a lot of milk between 10:30 + 11:00 a.m., and they ate more seed. Now they are snuggled against a jar of hot water sleeping.

P.M. Mike's other eye opened this afternoon.

They were both weighed and were:

Mike — 6.5 g, Pat — 6.6 g. They do a lot of washing of parts and biting and scratching. Sometimes they even bite each other on the ear or toe.

June 9, Last night at 6 o'clock feeding they did not take much milk. ~~This~~ Later at about 7:30 they took more milk. They were busy eating seeds a great deal of the time between 6 and 10 P.M.

This morning^{at 8} they again were busy eating seeds, but did not take more than 2 or 3 drops of milk. I tried them again about 9 o'clock and they took a little more. I am mixing 1 teaspoon of Klim with $\frac{1}{4}$ cup of water + adding

Memoranda
1943

Perognathus Californicus

June 9, M.V.Z.

4 drops of Squibb's cod liver oil (containing Vitamin A + D).

At 9 A.M. they weighed — Mike 6.3g + Pat 6.2 That is less in both cases than yesterday afternoon.

Pat it was decided is a ♀ and Mike is a ♂.

They have a sleek brown fur now, which lies close to the body. When we first got them they had just begun to get fur on the back. Here it was then a more grey color. The feet already had white fur when we found them. The tail had a definite bicolor white below and a dark grey above. They had very long vibrissae. The main change the last few days has been in the length and color of the general body fur ^{on the dorsal surface}. Today I notice that ^{white} ~~more~~ fur is appearing on the belly which has previously been naked. Fine white guard hairs have been visible for several days, particularly across the lower back when the animal sits humped.

Before carrying the mice home last night I put some seeds in their carrying

U. Memmler
1943

Perognathus californicus

June 9, M.V.Z.

box. When I got home about an hour later Mike had his cheeks bulging with seeds. Pat had only a few in hers.

Since their eyes have been open they have become much more nervous and excitable. They are also quick to climb out of my hand, up my arm, out of a small box or across a table. It may be partly their great activity which keeps them in motion when I am trying to feed them milk. They seem to have very little interest in milk today at all and just wiggle and squirm out of my hand when I try to feed them. Before they used to sit quietly for a minute or more lapping the milk from the end of the dropper, now they take one or two or maybe three laps and get distracted or disinterested. When I first got them they would sit in my hand on their hind legs, hold the dropper with their front feet and lap the milk from the open end.

P.M.

Succeeded in getting both to drink some milk after lunch today. I held them so as to keep the light out of their eyes. Just before lunch I fixed a new box for them. It is a

W. Memmler
1943

Perognathus californicus

June 9, M.U.Z.

Corrugated card board carton $9\frac{1}{2} \times 13\frac{1}{2} \times 10\frac{1}{2}$ inches. I have covered the floor with about 2" of shavings. I made a nest out of excelsior and lined it with wrapping cotton. I have two watch glasses sunk into the shaving. One contains mixed field seeds, the other fresh grass, carrot, mallow and Melilotus. A water bottle is suspended into the box. The mice immediately took to the nest I prepared for them. They did not voluntarily come out to eat until about 3 P.M. Pat now has her pouches full and has gone back to the nest to work on it. They seem to prefer the dry seeds to the greens of various sorts placed in the box.

June 10, I left Mike and Pat in their new box at M.U.Z. over night. I turned the radiator on for about an hour before leaving to warm the room up — and left plenty of food in the box. This is the first night since we found them that I have not taken them to bed with me to keep them warm. This morning the room was quite warm enough and the mice were warm when removed from their nest. Much dry seed and quite a bit of carrot,

Memminger
1943

Perognathus californicus

June 10, M.V.Z.

mallow and Melilotus were eaten during the night. When weighed about 9 am.

They were both heavier than the morning before. The mice were not at all inclined to take milk this morning.

P.M. At 1:15 I tried them on milk again & they both drank quite a bit. Every time I have looked at them today they have been busy eating. They seem to carry food to the nest and eat it there. They have both been very curious and active since their eyes opened. They frequently try to scale the walls of the cage. They climb on top of the roof of their exterior nest. One of them was digging in the shaving on the floor of the cage a few minutes ago. He gave vigorous kicks with his hind legs several times, these made a great deal of shaving become dislodged.

June 11,

The only time I tried them on milk they didn't want it. Today is the first time they have weighed more than the day I got them. They ate about $\frac{1}{2}$ the dry seeds and most of the carrots and apple during the night. Once during the day one was



V. Mennler
1943

Perognathus californicus

June 11, M.V.Z.

observed to stuff his cheek pouches with a piece of carrot, ^{using both hands to stuff it in & carrying a second in his mouth} ~~and~~ ran to his nest to eat it. Today they also seem noticeably more steady on their feet. They no longer give the spidery legs, unsure impression they did earlier when trying to walk.

June 12, Today they were out of their nest for the first time when I arrived. They had dug out some of the shavings behind the nest and were both crouching there. All of the apple, carrot and mallow (one watch glass full) was gone, and about half the dry seeds in another watch glass. They had again made a considerable gain in weight over yesterday.

On the table for their growth the approximate age is based on comparative time of weaning and eyes opening as stated in "Natural History of the Zulare Kangaroo Rat" — by Donald L. Zappe. (Jorn. Mamm., Vol. 22, No. 2, May 14, 1941) p. 137 + p. 142

One of the young hopped out of my hand onto the table this morning. Before I left at noon I put them in a metal box with loose sandy soil on the bottom.



1. Memmler
1943

Perognathus californicus

June 12, M.V.Z.

they started at once to dig underneath the nest using their hind feet to push out dirt.

June 13,

This P.m. I dropped in to see the mice and found them under the nest in a cleared place they had dug out. All the areas on their body where the fur is white have now been well covered with fur. This fur came in later and slower than the dark dorsal pelage.

June 14,

On arriving this a.m. I found Pat and Mike had excavated a large space beneath the nest cavity. They seem now to prefer the cavity they have dug to the other nest I made for them. When I had removed them from the box for a few minutes to weigh them, I returned them by placing them in the man made nest. One lingered long enough to go inside and come out again, the other immediately headed for the burrow underneath. I then removed the nest and placed it in another corner of the box. They at once began to excavate beneath it in its new location.

On June 7, when they were about 15 days old one of the mice while being held in my hand cracked the shell of a hard seed and peeled it off by



O. Memmler
1943

Perognathus californicus

June 14, M.V.2.

turning the seed in his hands, like one would turn corn on the cob, using his incisor teeth to crack and peel off the shell.

11:30 Pat sitting in doorway of relined nest eats a carrot (piece). She hold Carrot like this:



She ate about $\frac{1}{2}$ the piece which is about $\times 1$ as drawn. She dropped remainder in doorway and went inside.

11:45 I put pat in a glass jar and had some seeds in the jar for her to eat. I held the jar over my head and watched her pick up seeds with both hands and rotate them for a few seconds and then put them either into the pouches or mouth with both hands. I think they were being put in the pouches because ~~they~~ she did not stop long enough between seeds to be eating them. Mike when put in the same jar did not eat, but rubbed his face and the base of his vibrissae vigorously for a while. Then using one hand on either side of his face, he stroked vigorously along his jaw until his cheek pouches turned inside out. He seemed to be able to draw them back in without using his hands. The pouches were returned quite suddenly, as if by muscular contraction.



V. Memmler
1943

Perognathus californicus

June 15, M.V.Z.

After weighing and measuring the infants today Dr. Benson + I made a microscopic examination of the pelage. We found that there are 3 hair to a follicle at present in the infants. The central hair is dark with a light tip. It is this tip that extends so very long in the rump region, giving a halo-like appearance. The other two hair have a black tip and a yellow band beneath. These hair have now come out to the base of the sub-marginal band. There was no sign of new hair, coming in at shorter length than that of the rest.

A live juvenile was examined and found to have mostly 3 hair to a follicle also. There were some 5 to a follicle. An adult examined had mostly 5 hair to a follicle and some 7. From this it is believed that the infant pelage merely elongates to become the juvenile. Since the darker part of the hair is that which has already come out on the infants, it explains the present darker (brownier) appearance of the infants as compared to that of the juvenile which is quite grey.

The hair is sparser in the region



V. Menninger
1943

Perognathus californicus

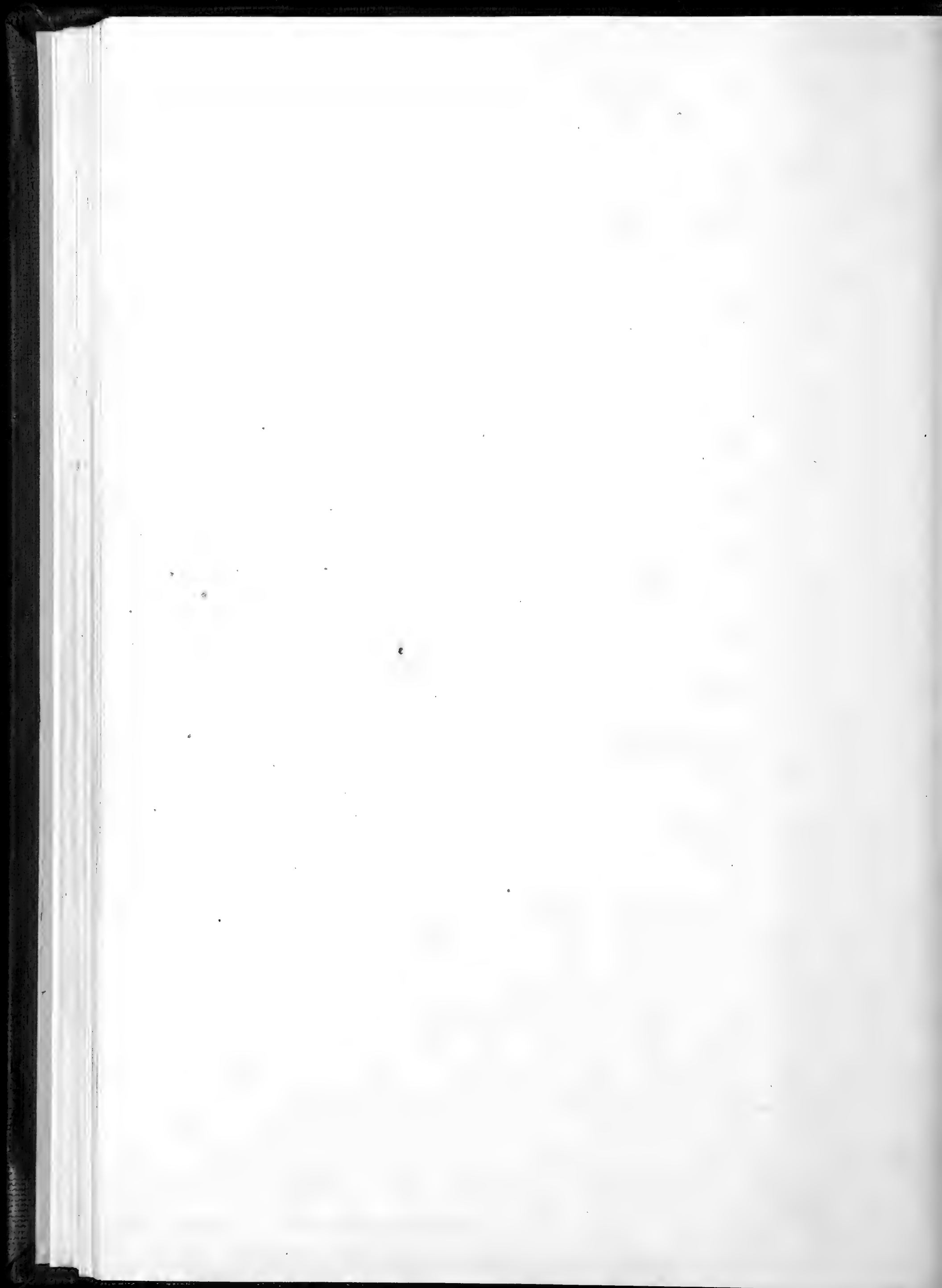
June 15, M.V.Z.

of the neck and just behind the ear in the infant than on the rest of the dorsal surface. This does not show when the animal is in the humped position, but it quite noticeable, almost as a hump when the body is elongated.

It has several times been noticed by me that the infants have an anti-phototropism. They do not react to very weak light if it is not brought on suddenly, but to a bright light they ~~variably~~ ^{quite frequently} react by trying to crawl under cover. If the cover is not sufficient for the whole body they stick their head under, in ostrich fashion. They also become very irritable when too warm, such as when held in a warm hand.

I freshly lined the infants nest last night before leaving. This morning I took out the lining to examine it and found a large quantity of seed husks. These seeds had been brought into the nest during the night and shelled there and eaten.

June 16, This a.m. both Pat + Mike were out of their box when I arrived. They were found behind the two book cases. In capturing Mike I accidentally hit her a hard blow. She seemed to be in a



V. Mermüller
1943

Perognathus californicus

June 16, M.V.Z.

bad way for a while, but seems to have recovered now. Very little of the food I put in the box was eaten during the night, so they must have gotten out fairly early. Both mice took long stretches in the soil about 5:00 o'clock. They cleaned much in the manner of a cat using the front feet to brush the head and face; the hind feet were used to scratch the ear and other areas. This scratching with hind foot is done too rapidly for the eye to follow. The use of the front feet in cleaning is slow enough to be followed.

June 17, Both mice were in the box this a.m. The box was a mess. Much digging had been done during the night and the food dishes were covered with soil. The green food left in the box was eaten. This was mallow and Melilotus. Some of the Melilotus was left, but the mallow was striped.

At noon I got some more soil to put in the box with the soil already present. I also added water to the mixture and tamped it down firmly in the bottom of the box. The mice at first did not know what to make of the new substrate and seemed to wander about the box aimlessly. My reason for putting in a firmer soil was so that the



V. Memmler
1943

Perognathus californicus

June 17, M.V.Z.

mice could dig a burrow if they desired to do so. Up until now the soil has been too loose + dry to stand in shape when dug. The mice have frequently and almost frantically tried to dig in this loose soil, but it has always caved in on them. A trench was dug to give the mice the idea of digging but they did not seem to catch on to the idea for a few minutes. Finally after about 10 min. Pat started to dig in the end of the trench. She would dig straight in front then lying on her side she would dig to one side, then turning over on her ^{other} side she would dig on that side. When there was too much dirt in the hole she would come out head first, pushing dirt ahead of her nose + front feet. This did not get enough dirt out of the hole for her, so she would go to the far end ^(away from the hole) of the pile of dirt thrown out, and begin to dig thru this loose dirt toward the hole, clearing a path to the hole as she went. As she neared + entered the hole the entrance was cleared of the soil she had pushed out in front of her nose. Mike joined Pat in the digging in about 5 min. When they had dug for about 15 min., they closed the entrance by pushing dirt from



V. Mermelov
1943

Perognathus Californicus

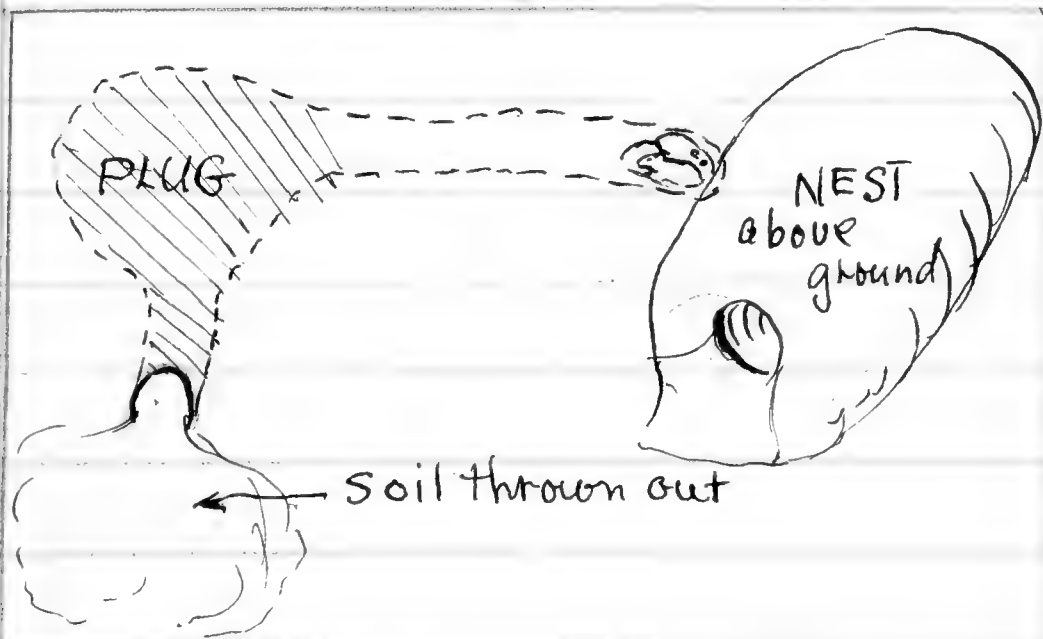
June 17, M.V.Z.

inside to fill the hole. They are both down inside now. I occasional here digging, but I can not see anything of it. Most of the time it is quiet and I do not hear anything.

I made other trenches before Mike joined Pat, but he showed no interest in further excavating these. When I left at 5 o'clock they were still down in the burrow.

June 18,

This a.m. on arriving I found the food etc. apparently untouched. The plugged hole looked the same as on the evening before. I dug up the burrow and found that the first part was well plugged and that the mice were at a great distance from the opening.



V. Memmler
1943

Perognathus californicus

June 18, M.V.Z.

After weighing + measuring the mice this a.m. Dr. Benson examined their fur under the microscope. The shoulder regions appear grayer than formerly. In this region it also seems that additional hairs are coming out at the old follicles. These are coarser than those already present. An area about 18 mm. in diameter was clipped from Mike's back, also the vibrissae on one side were cut to within about 6 mm of their bases. Hair on the end of the tail was also cut.

P.M. At noon when I left the mice had just constructed a new burrow in the ground. It starts in the corner behind the nest and runs around the corner clock-wise and down the long side of the box. A hole started earlier was passed under and made an opening to the outside. This was soon plugged from within. When I left the main exit hole was not yet closed, as the mice were still pushing out dirt and clearing their way back in. When I returned at 1:00 o'clock the main hole was plugged too and more dirt was thrown out on the surface. During the afternoon I accidentally broke into a piece of the tunnel. I set the nest over this place; during the afternoon Pat came out for seeds & filled



V. Merriner
1943

Perognathus californicus

June 18, M.V.Z.

her pouches.

June 19, This a.m. the mice were down in the burrow dug yesterday afternoon. They apparently had come out for seeds during the night. They
9.00 a.m. have begun construction of a new burrow.

They both dig on the same burrow. They seem to alternate going ahead. When both have gone down out of sight it is always the first ^{to go down} one that ~~that~~ reappears first. Thus I could guess correctly which one I would see emerge next. Both yesterday and today when I dug up their burrow to find them, I found them both in the same region, that is together, rather than in separate parts of the system.



V. Memmler
1943

Perognathus californicus

Pats' Growth Chart

Date	Approximate Age	Weight	Body Length	Tail Length	Total Length	Hind Foot	Ear
June 5,	13	7.0g ^{a.m.}					
6	one eye open 14	6.6g ^{a.m.}					
7	Solid Food Both eyes open 15						
8	16	6.6g ^{p.m.}		55		19	
9	17	6.2g ^{a.m.}	50	55	105	20	6
10	18	6.4g					
11	19	7.1g.					
12	20	7.6g	55	58	113	20	7
13	21	8.4g ^{p.m.}					
14	22	9.1g ^{a.m.}					
15	23	9.6g	62	62	124	22	8
16	24	9.7g					
17	25	10.2g.					
18	26	10.6g	66	65	131	23	8
19	27	11.3g.					
20	28	11.9g ^{p.m.}					
21	29	12.2g ^{a.m.}	66	66	132	23	8.



V. Memmler
1943

Perognathus Californicus

Mike's Growth Chart

Date	Approximate Age	Weight	Body Length	Tail Length	Total Length	Hind Foot	Ear
June 5	13 days	7.0 g. ^{a.m.}					
6	14	6.6 g. ^{a.m.}					
7	Solid Food 15						
8	Eyes open 16	6.5 g. ^{p.m.}					
9	17	6.3 g. ^{a.m.}	50	55	105	20	7
10	18	6.6 g.					
11	19	7.6 g.					
12	20	8.1 g.	55	55	110	20	7
13	21	9.3 g. ^{a.m.}					
14	22	9.9 g. ^{a.m.}					
15	23	10.3 g.	64	66	130	21	9.
16	24	10.1 g.					
17	25	10.7 g.					
18	26	11.4 g.	67	66	133	22	9
19	27	12.1 g.					
20	28	12.7 g. ^{p.m.}					
21	29	13.5 g.	71	69	140	20	10



V. Memmuler
1943

Perognathus inornatus

June 2, Indian Creek, 1500 ft., 13 mi. S Shandon, SLO Co., Calif.

One ♂ adult was caught in a live trap set on light colored sandy soil near Lotus and Chorizantha. A small closet hole was near by. Other plants identified were: Monardella lanceolata, Artemisia, and Mimulus.

June 5, Santiago Springs, 2700 ft., 8 mi. E + 1½ mi. S Simmler, SLO Co., Calif.

Two specimens were caught last night in 2 out of 48 live traps set along the banks of a creek bed leading south from the spring. 18 P. californicus were caught the same night + locality, so inornatus seem to be less common. Both ^{inornatus} were young and are being kept alive. There were small holes near where the specimens were caught. For description of bank see journal.



V. Memmler
1943

Peromyscus Californicus

May 26, Galician Range, 1500 ft., 5 1/2 mi. E-NE Soledad, Monterey Co., Calif.

Two ♂'s were caught in Snap traps near grass field under marginal shrubs. One was caught under a willow near a stream, the other under Ceanothus cuneatus

May 29, One young specimen was caught under Adenostoma and Oreganum on fairly bare, ^{loose} soil.



V-Mammals
1943

Peromyscus maniculatus

- May 24, West Side Arroyo Seco, 200 ft., 4 mi. S Soledad, Monterey Co., Calif.
11 specimens 6 ♂ + 5 ♀ caught in ⁵⁰ Museum
Special Traps. One caught in one of 50
live traps.
- May 25, Gabilan Range, 1500 ft., 5 1/2 mi. ENE Soledad, Monterey Co., Calif.
2 ♂ *Peromyscus maniculatus* were caught on
edge of grass field and canyon bottom
Chapparal mainly composed of *Adenostoma*.
- May 26, One ♂ caught under *Adenostoma* at edge of
grassy hillside ^{in Mus. Spec.} One ♂ caught in similar
place in live traps.
- May 27, One caught in live trap on cleared ground ~~in grass~~
slope.
- May 29, 9 were caught in live traps set on a hill
top under *Adenostoma* and Buck wheat,
sometimes near grass.
- May 30, Two ♂ were caught in *Microtus* runs between
Adenostoma shrubs in the grass. One
♀ was caught on bare ground under *Adenostoma*.
All caught in snap traps.
- June 1, Metz, 250 ft., Monterey Co., Calif.
4 specimens were caught in the vicinity of
a bank between two terraces made by
the over flow from the Salinas River. Willows,
Star Thistle and Lotus were abundant.
- June 2, Indian Creek, 1500 ft., 13 mi. S Shandon, SLO Co., Calif.
one immature ♂ and immature ♀ were caught
last night in two of 48 live traps set

V. Mearns
1943

Peromyscus maniculatus

- June 2, Indian Creek 1500 ft., 13 miles S. Shandon, Sh. Co., Calif.
on light colored sandy soil near Lotus,
Chorizanthe, & Monardella. The area was
flat where traps were set, but the country
was hilly in general with Adenostoma
covered slopes and Digger Pine trees sca-
ttered about.
- June 3, Santiago Springs, 2700 ft., 8 mi. E + 1 1/2 mi. S Simi, Sh. Co., Calif.
Four adult ♂'s were caught in 50 snap traps
set near the top of a north facing hill slope
covered with a scattered growth of
juncos and abundance of Stanleya pinnata.
The slope was quite steep.
- June 4, In 50 traps left in the same places as
last night I caught 3 ♀'s & 2 ♂'s.
- June 6, In 47 live traps I caught 2 imm.
♂'s and 1 adult ♂. These traps were
set along a creek bank. The creek was
dry or stagnant. There were many holes
in the bank and runways at its base.
The day before 18 Perognathus californicus
were caught in the same area
and 2 Perognathus inornatus. Today
7 Perognathus californicus were caught.
It would therefore seem that the P.
californicus, pocket mouse is the
dominant animal here rather than
the Peromyscus.



V. Mearns
1943

Peromyscus truei

May 25, Galilian Range, 1500 ft, 5 1/2 mi. ENE Soledad Monterey Co., Calif.

3 ♀ and 2 ♂ specimens were caught in
Mus. Spec. Traps on edge of chaparral & grass
near canyon bottom. Dominant shrub was
Adenostoma fasciculatum. A stream
runs thru the bottom of the canyon.

May 26, One immature ♂ caught under Ceanothus
at edge of wild grass field.

May 28, One ♀ was caught near a stream under a Ceanothus
bush. She had 4, 22 mm embs.

June 2, Indian Creek, 1500 ft, 13 mi. S Shandon, Sh Co. Calif.

One specimen was caught in one of 48 live
traps set on light colored sandy soil where
Lotus and Chorizanthe were abundant.
Land was flat but in hilly country with
Digger Pines and Adenostoma on the hills

O. Memmuler
1943

Leithrodontomys

May 24, West Side Arroyo Seco, 500 ft., 4 mi. S Soledad, Monterey Co., Calif.

One lactating ♀ caught in live trap.

May 25, Galillean Range, 1500 ft., 5½ mi. ENE Soledad, Monterey Co., Calif.

One ♂ caught in grass and tall grey plant.

May 26, Two ♂'s and one ♀ were caught last night. Two were caught in grass near Blue bush and Artemisia. One was caught along the stream under willows.

May 27, 6 were caught in live traps. 2 ♀ + 4 ♂. One female had 3, 6 mm embryos. They were caught in: pathway under Adenostoma, Open run in grass, Rabbit run in grass, Mound under Blue Bush in grass, run under Artemisia, and a mound in grass.

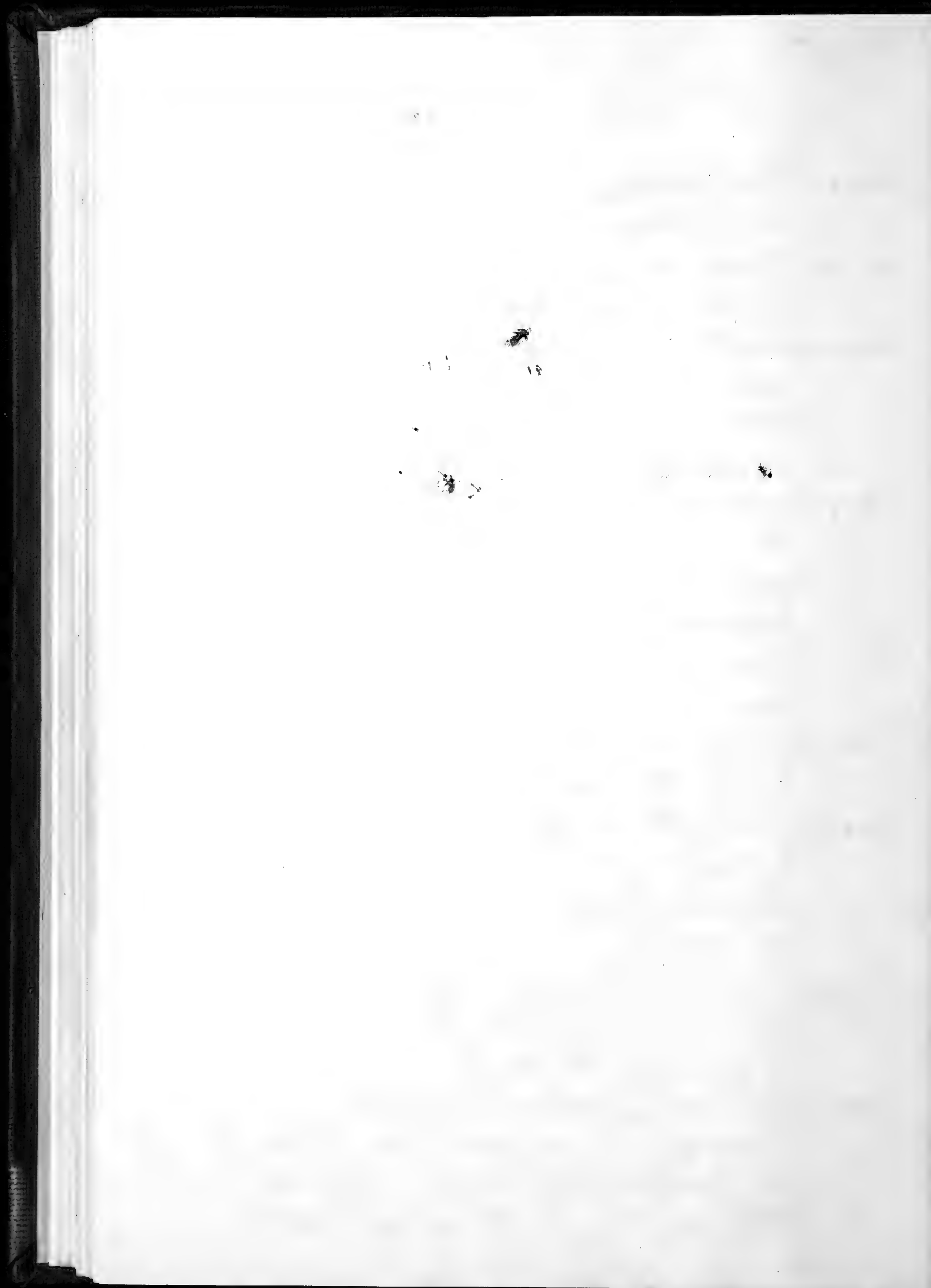
May 29, One ♂ was caught in a snap trap set in a microtus run.

May 30, The Halls brought us a mother and 4 young in their nest which they found under hay. Their eyes were still closed. I caught 2 ♂'s in microtus runs in snap traps.

May 31, I caught 5 in live traps set in field on a hillside facing west. There was an abundance of grass and Blue bush.

June 1, Mets, 250 ft., Monterey Co., Calif.

I caught 1 in a live trap set along the overflow bank of the Salinas river. Willows + Star thistle are abundant here.



V. Memmler
1943

Reithrodontomys

June 3, Santiago Springs, 2100 ft, 8 mi. E, + 1/2 mi. S Summer, SLO Co., Calif.

I caught 1 ♂ on a n.-facing juniper covered hillside in a snap trap.

June 4, Another ♂ was caught on the same hill slope today.

V. Memmler
1942

Sigmodon hispidus plenus

May 4,

M.V.Z., U.C. Campus, Berkeley, Alameda Co., Calif.

One of these animals was loaned to me to draw for Dr. F. Raymond Hall's Book on Nevada Mammals. He was borrowed from the Influenza Laboratories located on University and Acton Streets in Berkeley. His fur is similar in color to specimens from the Colorado River. He is very easily frightened and not at all tame. Most of the time he remains crouching in one corner of the cage. He seems to be more active when he is left alone, because foods, oatmeal, carrots and grass, are taken when I leave him alone. Even when he does move about the cage he never really straightens out full length but remain humped up. Only very occasionally he stands on his hind feet and reaches with his front feet up to the top of the cage along the side.

V. Memmler
1943

Cnemidophorus

May 28. Gabilan Range, 1500 ft., 5½ mi. ENE Soledad, Monterey Co., Calif.

One young specimen was shot by a rock pile. I have seen one other one, about two days ago. It was along the road in the barley that was not plowed under. It was much larger than our young specimen and was probably an adult.

O. Mearns
1943

Cumeces

May 25, Gabilan Range, 1500 ft., 5 1/2 mi. ENE Soledad, Monterey Co., Calif.

One seen in dry grass along fence, a second in green grass near creek. Both were a brown-yellow-green in color. Both seen between 5 + 6 o'clock in the afternoon. They were very large and the same color all over, no blue tail, ^{color} present.

W. Mermuder
1943

Lampropeltis getulus

June 1, 2 mi. NNW Creston, San Luis Obispo Co., California

A King snake was crossing the road,
we stopped the truck and picked it up.
There were oat fields on either side of the
road, a ^{dry} creek was nearby with cotton
woods and willows along it.



V. Memmles
1943

Sceloporus

May 28, Gabilan Range, 1500 ft., $5\frac{1}{2}$ mi. ENE Soledad, Monterey Co., Calif.
I shot 2 specimens on rocks in the field and one on a fence post by the road.

June 2, Santaigo Springs, 2700 ft., 8 mi. E + $1\frac{1}{2}$ mi. S Guadalupe, Sh. Co., Calif.
I shot two specimens that were poised on the ^{sloping} trunk of a cotton wood tree in the creek bottom. They seemed to me to have a more green color rather than the blue band of those caught in the Gabilan Range.



V. Mearns
1943

Uta

May 25, Gabilan Range, 1500 ft., 5 1/2 mi. ENE Soledad, Monterey Co., Calif.

One specimen caught outside cabin door
had an Orange throat and black spots
behind elbows.

June 5, Santiago Springs, 2700 ft., 8 mi. E + 1 1/2 mi. S Summit, SLO Co., Calif.

I shot a specimen near the creek in the late afternoon.



J. Mermmler
1943

Lawrence Gold Finch

Santiago Springs, 2100 ft., 8 mi. E + $1\frac{1}{2}$ mi. S Simmler, #5 Co., Calif.

June 2, While setting my traps last night (late afternoon) I saw a pair of birds in the Juniper trees on the north facing slope of the hill. They seemed to be very excited by my presence in their vicinity.

June 3, Yesterday when going over my trap line I again saw the pair of birds. I sat down under a Juniper and after a very few moments the ♀ went to a nest about 1 yd. above where I had set a trap. I stood up, frightening her from the nest again, and looked at the nest. There were 5 very light pink eggs about $\frac{1}{2}$ " long in a small nest made of grass and feathers. It was near the end of a branch on the Juniper tree and concealed behind its fruit and foliage.

June 4, When I picked up my traps this morning I again saw the ♀ sitting on the nest and when I frightened her from the nest the 5 eggs were still there as before.



